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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all genera questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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CANALS TO THE COAST.

There are three projects on foot in the United States to provide for lake shipping reaching the sea without transhipment or rehandling of cargoes. First there is the widening and improvement of the Erie canal, beginning at Buffalo, touching at Lockport, Rochester, Syracuse, Rome, Utica and ending at Cohoes, where it would form a junction with the Hudson, as illustrated in the MARINE RECORD, July 20th. This is favored by western New Yorkers, but it does not commend itself on the score of practicability, or as being anything like adequate for the present trade, and much less so for any increase thereof. A ship canal 270 miles in length, and with almost endless lockages before it reaches the Hudson, is not an attractive means of transp rtation, and is hardly likely to commend itself to those who might otherwise engage in that industry. Then there is the St. Lawrence-Champlain route, which means the construction of a canal from Tonawanda, near Buffalo, to Olcott, on the shore of Lake Ontario; thence on Lake Ontario and the St. Lawrence river to a point opposite Montreal. From there it is proposed to cut a canal across to the Richelieu river and then vessels would pass up that river to Lake Champlain and the Champlain canal to the Hudson. This project had the approval of the Cleveland commission in 1896, and the favorable regard of Boston and New York business men. The third route also begins with a canal from near Buffalo to Olcott, then over one hundred miles of the waters of Lake Ontario to Oswego, thence along Oneida lake and the Mohawk river to Cohoes, and then down the Hudson. It has the advantage of 244 miles in point of distance over the Champlain route to New York and navigable waters for a considerable part of the way. Its construction would, however, be costly, and here again there is the possibility of the route not being recommended.

Before the final adoption of any of these plans, due regard should be given to the vast increase of lake commerce, and the probability of such being doubled even within the next few years. All precedents point in favor of building more for future uses than for the present, and a wide latitude should be given in the national plans for waterways so as to facilitate extensions of same at a later date.

GREAT LAKES FISHERIES.

The census report for 1900 of the Great Lakes fisheries is expected to contain surprises in respect to the extension of the fisheries during the last ten years in the Great Lakes of Superior, Michigan, Huron, Erie and Ontario. From 1880 to 1890 the number of fishermen actually engaged in these waters increased 53 per cent. The capital invested during the same period increased 110 per cent., and the fish taken increased from 68,000,000 to 118,000,000 pounds, or 70 per cent. Lake Ontario was the only one to show a loss. In fact, the Great Lakes fisheries are now the fisheries of the Great Lakes to the west of Buffalo, and Lake Ontario is no longer a factor in the matter.

Since 1890 the increase in the number of fishermen, in capital invested in these fisheries and in amount of fish taken has shown a ratio even larger than prior to 1890, and it is for this reason that some important surprises are expected in the next national census. Very few persons have any very clear idea of the wonderful productiveness in fish of the waters of the Great Lakes. An estimate based on the known production showed that in the decade terminating with the census of 1890 1,000,000,000 pounds of fish were taken, which yielded the fishermen $25,000,000. In 1890 6,996 persons were engaged in the capture of fish in the Great Lakes. These employed 107 steamers, valued at $350,000, and 3,876 vessels and boats, worth $325,000. The apparatus used consisted of 3,800 pound nets and trap nets, the value of which was $825,000; gill nets to the value of $400,000; 176 seines and other apparatus. The capital invested in shore property directly connected with the fisheries was nearly $1,000,000. These items give, as the total investment in fishing property about $3,000,000. The quantity of fish taken was 118,000,000 pounds, the value of which at wholesale was $2,615,784, and at retail probably $5,000,000.

Two-thirds of the catch of the fisheries of the Great Lakes is made up of four kinds of fish—herring, trout, whitefish and sturgeon. The catch of lake trout, which is one of the most important and highly esteemed fishes of the Great Lakes, increased from 4,397,031 pounds, or 65 per cent. from 1880 to 1890. It is most abundant in Lake Michigan. Next to herring whitefish is the most abundant and most profitable catch in the Great Lakes.

THE NEW ARGONAUT.

So much has been said and written of late on the subject of submarine navigation that the recent launching of Simon Lake's New Argonaut cannot fail to be of the greatest interest, even though the boat is not primarily intended for use in war.

The purposes of this new vessel are largely scientific, and after making an exploration of various wrecks along the coast, it is probable that she will be sent south to locate new sponge beds in the West Indies, and that an attempt will be made to penetrate beneath the ice-floes of the Antartic Ocean.

In the current number of Harper's Weekly the following description is given of the new invention:

"The New Argonaut is 66 feet long and 10 feet wide, and weighs about a hundred tons.

"The boat will habitually travel on the surface until it reaches the place where it desires to submerge. It will then drop down-haul weights from its reel, and by winding up the cables attached to the weights on windlasses within, and letting water into its ballast-tanks, sink directly down. On the bottom it will become a submarine automobile, rolling over the sand on three wheels propelled by electric engines and gas engines, and aided by its screw."

The lagest dry-dock in the world will be the one now being constructed by the Newport (Rhode Island) Shipbuilding Company. Its length inside the caisson will be 806 ft.; the breath on the floor 80 ft.; and at the top 162 ft.: depth of water over the sill at average high water, 30 ft.

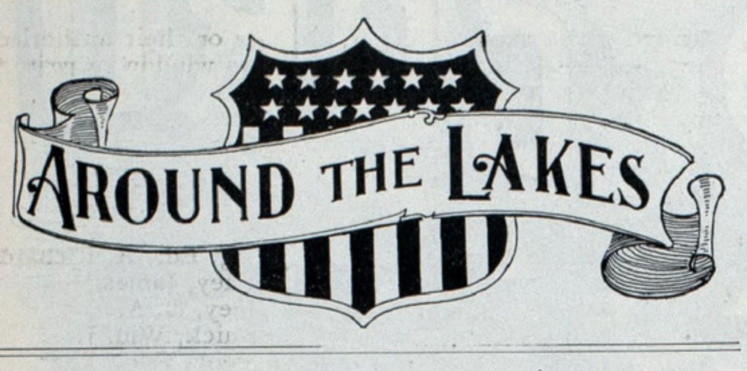
BUILDING VESSELS UNDER COVER.

Shipbuilders will be interested in the report of Consul Metcalf, at Newcastle-on-Tyne, giving an account of two covered berths in the establishment of C. S. Swan & Hunter at Wallsend-on-Tyne. This is the only firm in England which has gone to the expense of erecting sheds to enclose the vessels building. The idea of carrying such a project into effect originated in the mind of G. B. Hunter, the managing director of the company, conceived during his business tours in the United States, including several visits to lake shipyards, the huge structures enclosing the exhibits at the famous Chicago exhibition first suggesting to his mind the practicability of the development of the principle on a more enlarged scale in the covering of vessels in course of construction. Two huge steel sheds have been erected, their present dimensions being 500 feet in length, 82 feet in width, and 100 feet in height. Apart from the advantages accruing from the workmen in all the departments of the shipbuilding trade being able to follow their employment from Monday morning to Saturday at noon under protection of the sheds, the facilities in point of labor are such that steady men of the best class are securing engagements with the firm. Under such a condition of things it will be understood that the firm gain in turn for the enterprise and outlay, inasmuch as they are in a position to undertake to build and equip the vessels in less than half the prescribed period essential for the execution of the work in establishments in which climatic considerations naturally form an important factor. The workmen in all the outside departments speak in terms of the highest commendation of the advantages which the enclosed berths afford, not the least of which is the greater safety to life and limb. It is known that many lives have been lost through the oscillation of the uprights, the ends of the staging becoming detached, and the men falling to the ground below; but as uprights are dispensed with in the case of vessels built under the sheds at Wallsend, a spirit of confidence is engendered among the riveters and other sections of the men, the stagings being attached to the massive still trellis work of which the sides of the shed are composed. In point of expedition and the finish of work, the men participate largely in the facilities which the sheds afford. A plant in which all the improvments have been introduced and driven by electric energy, is at the disposal of the men, by which the plates and bars are raised from the ground with the utmost promptitude by electric cranes, and placed in position, one huge crane working on the roof with a 60-foot jib, while several cranes of lesser power travel immediately under the roof, which is of strong plate glass, as well as part of the sides, which have been enclosed, with the result that the workmen are exempt from the discomforts, not only of a stormy day, but even of a passing shower.

It might also be noted that the launches at the yards of Swan & Hunter are all end on ones as in the majority of cases with foreign shipyards. On the lakes vessels are launched, or take the water sideways.

A NEW CANADIAN LINE.

An application has been made for a charter for the Quebec, Hamilton & Fort William Navigation Co., with a capital stock of $1,000,000. The incorporators are W. T. Wood, M. P., Senator Sanford, Mr. Southam, C. E. Doolittle, C. S. Wilcox, W. D. Long and A. B. Mackay. The company proposes to construct, acquire and navigate steam and other vessels for the conveyance of passengers, goods and merchandise between the ports of Canada, and to and from any port of any other country, and to carry on the business of common carriers of passengers and goods, and of forwarders, wharfingers, and warehousemen, and to deal in goods, wares and merchandise. Two steel steamships are to be commenced at Hamilton this year and others later on.



BUFFALO.

Special Correspondence to The Marine Record.

The Triton, 35 tons gross and 24 tons net, built here and hailing from this port, has been granted an official nubemr this week, also the barge H. B. & B. No. 14, 354 tons.

It is now quite in order for this port to pass the one million bushel a day in grain receipts. The total last Wednesday was 1,094,475 bushels, and it is all being promptly discharged on arrival.

E. C. Maytham's new tug Triton, built for him at the yards of William Hingston & Son, is one of the finest tugs in the harbor and will surely be included in those taken by the new tug trust.

There has been brisk business in Tonawanda lumber carrying this week. About 20 cargoes, aggregating 15,000,000 feet of lumber, passed down the Niagara river in one day, and still they are coming.

On Friday last the Anchor liner Codorus discharged at Erie 1,000 tons of copper and 20,000 barrels of flour. The copper was worth $380,000, and the flour brought the total value of the cargo up to $450,000.

Buffalo's two big tug lines, Maytham's and Hand & Johnsons's have practically been absorbed by the Great Lakes Towing Co. The price paid for the boats is said to be $175,000 with, of course, a large proportion of stock issued to the late owners.

The new steamer Pennsylvania on the route between Erie and this port is doing an excellent and increasing business. Her speed is an easy eighteen miles an hour. Taking the distance from light to light as 80 miles, she has covered the ground in 4 hours, 19 minutes.

Hiram W. Sibley, the Rochester millionaire, who purchased the small excursion steamer Columbia for $16,000, and transformed her into a handsome pleasure yacht, also changed her name to the Themis. It is understood that Mr. Sibley will take her to Europe this year on an extended trip.

The case of assault upon Henry Manion by Albert Smith, on board the whaleback steamer Thomas Wilson recently, was settled by Smith's representatives paying Manion $100 and costs. Sworn testimony of witnesses showed that the assault was unprovoked by Manion and that Smith was under the influence of liquor. Manion had his hands in his pockets, it is said that Smith struck him with a hammer, and attempted to hit him again. He was only prevented from doing so by the interference of John McNamara.

Suit for damages aggregating nearly $1,000,000 have been brought against the State of New York on account of the State canals improvement work done under a $9,000,000 appropriation, according to a report recently made by the Attorney-General. In all there are about 600 claims for damages, and the Attorney-General has organized a special corps of lawyers to investigate the claims for damages and protect the State's interest before the Court of Claims. Among the claims is that of the Grand Trunk railway for $31,000; the Buffalo Dredging Co., $10,000; the Empire Portland Cement Co, for $27,847; the Onondaga County Savings Bank, $15,000; and Edward Joy, of Syracuse, $10,500. The Syracuse claims are due to damage caused by a break in the Erie canal.

While riding on his bicycle last Friday, Alexander McMaster was knocked down by a runaway horse and died within a few minutes after reaching the hospital. Capt. McMasters, as he was generally called, was born at Fort Erie, just across the Niagara, and though he spent the first twenty years of his life in Canada, he removed to Buffalo in his young manhood. From 1862, when he entered the King Iron Works, down to his death, he had been identified to an increasing extent with commercial interests. For eleven years he was chief engineer of the Commercial line of steamers. In 1883 he was appointed United States local inspector of boilers for the district of Buffalo. President Harrison appointed him United States supervising inspector of steam vessels in the Ninth district in 1889. This position he held until 1894, and for the last six years he was vice-president of the Union Bank. In all of these positions, public and private, Mr. McMaster served faithfully. He was a genial and popular citizen, whose death, under such circumstances, is deeply regretted. The religious services were conducted by Rev. Charles F. Wrigley, pastor of St. Mary's-on-the-Hill. DeMolay Lodge No. 498, Free and Accepted Masons, conducted the services at the grave. The pall bearers were Horace A. Noble, Joel H. Prescott, Edwin Leslie, Charles H. Avery, James Kerr, H. A. Menker, William D. Dougherty, Edward Brown. Many beautiful floral emblems from various societies, of which Capt. McMaster was a member, were sent.

CHICAGO.

Special Correspondence to The Marine Record.

It will cost about $10,000 to repair the steamer E. W. Oglebay, which was recently ashore on Round Island, Straits of Mackinac. Repairs will be made here.

Norman Hyde, a deck hand, fell into the hold of the Canada-Atlantic liner Roman, on Tuesday, and suffered injuries that may prove fatal. His skull was fractured and left arm broken.

Mr. A. S. Cameron, deputy county clerk of Cook County, and wife, have returned home after a most enjoyable cruise from here to Port Huron, thence to Toledo via Escanaba, on the steamer C. A. Eddy.

Capt. Lyman Feltus, of Benton Harbor, has launched a passenger steamer to ply on Pawpaw Lake. Her dimensions are 60 feet in length, and 12 feet beam. Although it is late in the season he expeets to get a good deal of work out of her this year.

The rush to make up for lost time in handl ng iron ore is on at the Illinois Steel Company's plant at South Chicago. Vessels are kept constantly in waiting for their turn at the ore docks, and not an hour of working time is being lost so great is the haste to add to the supply of ore. It took just twelve hours to unload the 7,300 tons from the new schooner Manila.

The American Wrecking & Salvage Co., Milwaukee, libeled the steamer H. A. Root on the claim of the wrecking company that Capt. Britain, the Root's owner, has failed to carry out his contract to start the steamer on an expedition to attempt the recovery of the copper cargo of the sunken steamer Pewabic. The Root was engaged the two previous seasons on this work.

Admiral Francis J. Higginson, formerly captain in command of the battleship Massachusetts, was in Chicago this week. He is now at the head of the government Light-House Board, and in that capacity has just finished a tour of the lakes. He expressed the opinion that there is a need of more lights and other improvements at many stations to meet the increased demands of lake commerce.

The season is undoubtedly a short one for passenger lines but they are having all that they can do this year and a prosperous season is now assured. Each year sees an increase in the travel by water and very little advertising goes to fill up all the excursion trips. Either people are beginning to take more enjoyment or they are fast learning the benefit and pleasure to be derived from a lake ride.

Several changes of masters on vessels have been recorded during the past few days. Peter Peters will succeed Captain C. H. Ellis on the steamer Hilton, while S. S. Burke will be succeeded by Captain A. C. Loudin on the steamer Lawrence of the Poeple's Transportation line. Jacob Jacobson will take the place of Captain Tohmas Olson on the schooner Mary A. Gregory. The barge Aberdeen which was recently purchased by H. J. Pauly, will be in charge of Captain Jonas Hansen.

The June report of the government engineering office, Corps of Engineers, U. S. Army, states that $1,802,571 has been expended on the outer harbor and that the work is nearly completed. The channel of the Chicago river has been improved over 11½ miles of its length, the amount of material removed amounting to 1,801,896 cubic yards. At South Chicago an outer harbor breakwater is under construction, 3,640 ft. of the north pier and 2,020 ft. of the south pier having been completed. The channel of the Calumet river has been dredged to a width of 200 ft. and to a depth of 16 ft. for a distance of about 3½ miles, the amount of material removed being 1,806,748 cubic yards. Under a modified project 320,405 cubic yards of material have been removed from the harbor, giving a channel of 200 ft. wide and 20 ft. deep for a distance of two miles, besides a turning basin of nearly three acres.

The Detroit Evening News noted this week that the La-Salle street tunnel magnetized the steamer Thos. Davidson Saturday night, and she remained glued hard and fast until the next morning. She drew 17 feet 6 inches, and was loaded with coal, some of which had to be lightered. In view of all the recent talk about magnetic attraction swiveling vessels out of their courses and landing them in places where they ought not to be, the suggestion made by the Evening News is, to say the least, a unique one. The crown of the La Salle street horizontal chimney or funnel, crossing the river, has had friction enough over it to create magnetism, electricity or any other form of local attraction superinduced by attrition. Just the same, if something in the shape of a ram or plow bow comes along, nothing more attractive than old bricks and mortar would be found at that treacherous and doubly d——— spot.

The Graham & Morton Co. now has an active opposition as the "matrimonial line." The People's Transit Co., of Benton Harbor, has planned to have its steamers between Benton Harbor and Milwaukee fitted up with bridal apartments, and will place matrimonial coupon tickets on sale. The plan is to give Milwaukee sweethearts an opportunity to go to St. Joseph and Benton Harbor direct and compete with Chicago couples for the championship in scoring the largest number of marriages in the new Gretna Green on the Michigan shore. Arrangements have been made with the county clerk at St. Joseph to dim the glory of the Graham & Morton line as the "official route" of people with matrimonial intentions. The rivalry between the lines attracts a large crowd of excursionists to St. Joseph every Sunday, and the incoming boats at that port are met at the wharf regularly by a throng which is impelled by curiosity to act as a reception committee to bashful swains and blushing sweethearts. It is said that Milwaukee in its palmiest days never equalled Cupid's new paradise on the east shore.

South Chicago shipping interests are confronted with a problem in the falling off of water shipments of grain. Last year at this time from 10 to 12 grain laden boats left the Calumet daily, as against a sixth of that number at the present time. This slump of lake grain carrying is attributed by elevator and vessel men to several causes, among which are, the late opening of the season this year, thereby retarding by nearly one month the shipping of grain from the South Chicago elevators, and the lack of boats to handle the commodity because of the unusual activity in the iron ore trade. Vessel owners are not anxious to carry grain to Buffalo at 2 cents, when 90 cents is offered on ore from Ashland. Another reason why fewer boats are leaving the Calumet river is the gains made by the railroads in their bid for grain handling. Last year about 50 car loads of grain were shipped east from South Chicago daily whereas during the present season something like 500 cars a day has been maintained. The lumber carrying trade has also been marked by large gains for the railroads. The only gain in Calumet shipping has been in the receipts of ore at the docks of the Illinois Steel Co. These figures are causing concern to the marine trading and labor interests of South Chicago.

DETROIT.

Special Correspondence to The Marine Record.

The wrecking steamer Root has been released from her libel at Milwaukee through an arrangement with the American Wrecking Co. The owners gave a bond of $5,000.

An official number has been assigned this week by the Bureau of Navigation, Treasury Department, to the steamer Jessie Spalding, 1043 gross and 856 net tons, built at West Bay City, Mich., and hailing from Chicago, Ill.

Arrangements have been entered into for the Hill Steamboat Co. to place the steamer Unique on the Escanaba and Green Bay route. The steamers Hill and Unique will thus form an opposition or competing line with that of the Harts.

To secure their claims for repair work and materials furnished, the Detroit Dry Dock Co. has filed a libel to the amount of $17,310.94 on the steamer City of Rome. Deputy United States Marshal Cash P. Taylor served an attachment on the steamer Saturday and took possession.

The steamer H. E. Runnels, one of the vessels turned back to the lakes through the business failure of the Atlantic Transportation Co., ran aground in St. Lawrence river during the return trip, and had fifteen or twenty of her floor frames broken. She now occupies a drydock here for final repairs.

C. W. Harkness, of New York, the Standard oil magnate, and his $100,000 steam yacht, Peerless, visited Detroit on Saturday last. Mr. Harkness with his wife and a party of friends are on their way up the lakes for a cruise on Lake Superior. The Peerless is 106 feet long and one of the most perfect yachts in her appointments that is owned in the United States.

It is generally believed in West Bay City that the Wheeler shipyard will be closed after the lumber carrying steamer now on the stocks is finished in August. There has been no move made toward rebuilding the Excelsior foundry, which was recently destroyed by fire, and this is a necessary adjunct of the yard. If the American Ship Building Co. starts to rebuild the foundry, the people will have reason to believe that the yard is to be operated.

The Grand Trunk railway carferry Huron, which prior to the construction of the Port Huron tunnel, ran between Point Edward and Fort Gratiot, is at the yards of the Detroit Ship Building Co. Everything above her deck beams will be torn away and replaced by an iron deck. The new deck will be housed over and her stern will be shaped to fit the landings at Detroit and Windsor. When all these alterrations have been completed, the Huron will be used to transfer Grand Trunk trains between Detroit and Windsor.

The schooner John Breden foundered on Lake Huron off Lexington, on Friday. Three of her crew were drowned. The only name known is that of Jane Conners, the woman cook. The crew were shipped at Port Huron and the Breden left for Bay City in tow of the tug Winslow. She was coal laden for that point from Ohio ports. The Breden foundered in about seven fathoms directly in the course of vessels on Lake Huron. Her spars project above water and the wreck is a dangerous obstruction to navigation. The John Breden, 319 tons, was built at Port Dalhousie in 1862, registered owner M. S. Jones, Detroit. The Breden held a B 1 class last year to carry coarse freights only and was valued for insurance purposes at $1,800. This year she was off the books and had probably not been surveyed for rating.

THE British steamer Gaspesia, which was adrift surrounded by ice-floes in the Gulf of St. Lawrence all spring, and was finally towed into St. John's, Newfoundland, by the steamer Kite, has been sold, by the order of the Supreme Court, to pay the salvage awarded the Kite. She was bought by Capt. Farquhar, of Halifax, for $27,000. Capt. Farquhar intends to run the steamer between New York, Halifax, and St. John's. The salvage awarded was reduced from $12,500 to about half of that amount; while the Gaspesia was an old steamer the price paid for her was an insignificant amount.

CLEVELAND.

Special Correspondence to The Marine Record.

The report that the schooner Sophia Minch, ashore near Ashtabula, had been abandoned is premature. Capt. Gerlach, manager of the Minch Transportation Co., will make further efforts to release her.

The barge Smeaton came down from Ashland this week with the largest cargo of ore that was ever carried into Cleveland harbor. She had on board 7,446 gross tons of ore, which is very close to the lake record, if it does not surpass it.

Whoever would have thought that that pioneer pilot of these unsalted seas, Capt. Geo. P. McKay, ships-husband of the Mutual Line, would ever mount a wheel. I saw him spinning along on an asphalt pavemeut at a 2:40 gait this week, and he seemed to enjoy it too.

The steamer Oregon of the Gilchrist fleet will make the first trip of the season this week. She has been rebuilt and the repairs on her cost about $10,000. She has been changed to a single decker. She received a new stem, apron, main deck and deck beams, new hatch coamings rails and cabins and recalked.

There are quite a number of Canadians in Cleveland occupying prominent positions in business places and it has been proposed to form a club or society where they could meet for social intercourse, etc., at stated intervals. Several of these gentlemen are connected with marine interests and the affair will probably be a go.

M. A. Hanna & Co. have made an important business connection this week with the National Steel Co. The mining of iron ore as well as the handling of the Mutual and Menominee lines of steamers will all be carried on from the office of M. A. Hanna & Co. The present fleet can carry a million tons of ore in one season.

Capt. A. J. McKay, of the D. & C. line steamer City of Detroit, has been 21 years in the service of the company. The son of a Scotch fisherman, he is to the manner born, and makes an excellent passenger steamboat captain. A big man physically and modest professionally, besides holding the position of first vice-president of the Grand Lodge of Shipmasters. Capt. McKay has been four times elected president of the Detroit branch of that organization, than which no greater distinction has ever been conferred on any lake shipmaster.

The first of the two steamers now building for the Cleveland Steamship Co. at the old yards of the Globe Iron Works Co., will be launched Saturday, August 5. She will be named in honor of H. C. Frick, who is at the head of the Carnegie Steel Co. The new boat which will come out in September will be six feet longer than the M. A. Hanna, owned by the same company. The third boat, which will be a duplicate of the Frick, will not come out until next season. The owners of the Frick were offered a fancy price for her while she was on the stocks, but would not sell. Nearly all the stockholders of the company are local men. Capt. John Mitchell is the managing owner.

According to present intentions the propeller Malietoa, which was to have been named the Texas, will be launched from the Lorain yards of the American Ship Building Co., on Saturday, August 5th. The Malietoa is the same size as the Pennsylvania, and will be one of the largest boats afloat. Capt. G. B. Mallory, commodore of the Minnesota Steamship Co's. fleet, will command the new vessel. Capt. George always superintends the construction and takes charge of the last new boat built for the company, and on this account has had in turn quite a number of commands during the last few seasons. I have also heard it stated on several occasions that there is no one more worthy of the trust that is reposed in him by his owners.

The district engineer, Colonel Jared A. Smith, Corps of Engineers, U. S. A., is in favor of this port having a nominal depth of 25 feet instead of 21 feet. By nominal depth I mean the official dredging figures that is supposed to be maintained, though an actual 21 feet always kept from the piers in through the river, would accommodate the deepest draft vessels frequenting this, or any other lake port. The sums expended in improving the harbors under Colonel Smith's supervision from the time such work was started up to June 4, of this year, are as follows: Cleveland, $1,949,076.85; Toledo, $1,624,483.73; Monroe Harbor, $250,515.27; Port Clinton, $87,582.77; Sandusky, $477,229.38; Huron, $172,273.71; Vermillion, $132,701.28; Lorain, $292,204.77; Fairport, $378,808.86; Ashtabula, $662,888.56; Conneaut, $232,756.64. The total thus far appropriated for Cleveland is $2,572,631.61.

WORK on the big grain elevators erected by President James J. Hill, of the Great Northern Railroad, at Interbay, Seattle, Wash., has been completed, and the elevators have passed into the control of the Great Northern Railway, to be used for the storage of Oriental freight, which is reaching enormous proportions. The buildings are mammoth structures and have a capacity of 1,000,000 bushels of grain. The harbor has been dredged for several weeks past. The huge dredges have deepened the channel, and now the largest ships afloat can easily be accommodated. This marks an era in the constantly increasing facilities for handling the enormous trade done by the Pacific coast to and from the Orient.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting. The bearing may be taken when the Sun's center is on the horizon, rising or setting. The three elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Sunrise.	Amplitudes.	Bearing P'ts.	Bearing Comp.
July 28.....	E. 26° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.
July 30.....	E. 25° N.	= N. 5¾ E.	= N. E. by E. ¾ E.
Aug. 1.....	E. 24° N.	= N. 5⅞ E.	= N. E. by E. ⅞ E.
Aug. 3.....	E. 23° N.	= N. 6 E.	= E. N. E.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.

Sunrise.	Amplitudes.	Bearing P'ts,	Bearing Comp.
July 28.....	E. 26° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.
July 30.....	E. 26° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.
Aug. 1.....	E. 25° N.	= N. 5¾ E.	= N. E. by E. ¾ E.
Aug. 3.....	E. 24° N.	= N. 5⅞ E.	= N. E. by E. ⅞ E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Sunrise.	Amplitudes.	Bearing P'ts.	Bearing Comp.
July 28.....	E. 27° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.
July 30.....	E. 27° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.
Aug. 1.....	E. 26° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.
Aug. 3.....	E. 25° N.	= N. 5¾ E.	= N. E. by E. ¾ E.

LAKE SUPERIOR, LAT. 48° N.

Sunrise.	Amplitudes.	Bearing P'ts.	Bearing Comp.
July 28.....	E. 29° N.	= N. 5⅜ E.	= N. E. by E. ⅜ E.
July 30.....	E. 28° N.	= N. 5½ E.	= N. E. by E. ½ E.
Aug. 1.....	E. 27° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.
Aug. 3.....	E. 26° N.	= N. 5⅝ E.	= N. E. by E. ⅝ E.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

RECENT MARINE PATENTS.

Patents on marine inventions issued July 25, 1899. Reported specially for the MARINE RECORD.

629,343. Motor. H. S. Durand, Rochester, and R. M. Beck and R. K. McLellan, New York, N. Y., assignors to the Phillips Manufacturing Co., New York, N. Y.

629,365. Life-boat. Julius Huebner, Milwaukee, Wis.

629,383. Hook for boat—detaching apparatus. Christian MacKeprang, A. F. Petersen, and J. F. Moller, Kiel, Germany.

629,402. Bow-facing oar. John Steele and Anton Olson, St. Paul, Minn., assignors of one-third to P. M. Lindquist, same place.

629,570. Chain propeller. Louis Kohn, Oakland, Cal.

629,700. Turbine. Franz Prasil, Zurich, Switzerland.

629,757. Device for correcting compass errors. Jorgen Christensen, San Francisco, Cal.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, reports eastern freights as follows:

During the early part of the week, in consequence of the enhanced figures asked by owners, the demand for grain tonnage tapered off very considerably, and 3s. 3d. for Cork f. o., 2s. 9d. @ 2s. 10½d. for picked ports from range constituted highest and practically nominal rates quoted by shippers. Owing, however, to the fact that owners have somewhat receded from their advanced demands, a number of fixtures have been effected more recently at from 3s. 3d. @ 3s. 4½d. to Cork f. o., 2s. 9d. and 2s. 3d. for heavy grain and oats respectively for picked ports, all from range and for August loading; one September boat is reported closed at 3s. 6d. The demand for prompt tonnage from the Gulf for general cargo has not revived, but timber freights show some advance, and deal shippers form the Provinces have increased their freight limits, without, however, meeting with liberal response in the offer of tonnage.

Sail tonnage remains exceedingly scarce, and we have actually nothing to add to our remarks of last week. The market is very strong, with an upward tendency, although the business arranged for is very light, owing to the scarcity of room.

CAPT. JOHN PRINDIVILLE, of Chicago, wrote to Ed. H. Gillman, of Detroit, requesting him to search the custom house records for a sea register issued the last of October or the first of November, 1850. Capt. Prindiville stated that this register, which was the first ever issued for a lake vessel to go through the St. Lawrence river bound for Europe, was obtained for the brigantine Minnesota, loaded with copper ore from Bruce Mines, Georgian Bay, for Swansea, Wales. The captain, for some purpose of his own, wanted the names, ages, nationalities, and other particulars the register contained relating to the crew of the boat.

LETTERS AT DETROIT MARINE POST OFFICE.

JULY 26, 1899.

To get any of these letters, addressees or their authorized agents will apply at the general delivery window or write to the postmaster at Detroit, calling for "advertised" matter, giving the date of this list and paying one cent.

Advertised matter is previously held one week awaiting delivery. It is held two weeks before it goes to the Dead Letter Office at Washington, D. C.

Bresnahan, John, Macy.
Bilton, Jake, Wilhelm.
Butler, Frank.
Blair, Henry.
Bradley, J. W., Vance.
Campau, R. M., Monarch.
Cuneen, Jno., Tokio.
Dusseau, Frank, Vance.
Elliott, Frank, Wall.
Johnston, Al., Roberts.
Krantz, Robt., Denver.
Lyon, J. B.
Little, Fred.
Morrow, Edgar, Kaliyuga.
Mont Clair, A. B.
Motley, Geo.
Mercer, Harry.
Maloney, Geo., Wand.
Manning, Ed., A. Richards.
McKenney, James.
McKelvey, G. A.
McCormick, Wm. J.
Pennycook, Geo., Rees.
Phillips, Joseph.
Perrond, Jos., North West.
Quigley, T. P., P. Minch.
Roxwell, S. H., Wilhelm.
Sniffin, Terrell E.
Smith, Hiram.
Tennisson, Nellie, Wand.
Tobin, Jacob, Sam Mitchell.
Towle, Geo., Italia.
Wager, Harry, Centurion.
Williams, May, Williams.

FLOTSAM, JETSAM AND LAGAN.

The autom-o-beel is the aristocratic means of locomotion these days. Messenger boys must secure a wheel to hold their jobs, but the luxury is the more commodious self-mover.

A six-masted schooner is being built at Camden, Me., and sea-faring men thereabout are much concerned what name shall be given the sixth mast. "After-jigger-mast" has been suggested seriously, and "Saturday mast" has its advocates. The schooner is to be nearly 375 feet in length.

A Belgian engineer has invented a hydraulic propeller for ships, which, it is claimed, attains a speed of 40 knots per hour, without increasing the consumption of fuel. It is intended to fit the invention to a large steamer, and a run across the Atlantic is to be made with the oject of demonstrating its superiority over the ordinary steam-screw propeller.

One of the best-known citizens of the "Soo," is dead, aged 55 years. Mr. Jackson was appointed chief clerk on St. Mary's Falls canal shortly after the opening of the Weitzel lock in 1881, and was acquainted with a large number of vessel men. He represented his district in the Michigan legislature in 1879, and held several local offices at the "Soo."

It is now claimed that the Canadian steamer Hero ran aground near Alexandria Bay because the large buoy placed on the shoal had changed its position, moving thirty feet from the original place. An action it is said may be entered by the owners of the boat against the United States government for damages. It would be a crusty old action though that would hold the light-house inspector to be a wrecker.

Bids were opened in Washington on the 19th for the sale of the anxiliary naval vessels that have been advertised lately. The city of Boston bid $25,000 for the ferry boat Governor Russell. Arthur J. Phillips, of Portsmouth, Va., bid $38,091 for the old ferry boat East Boston. The Vulcan, formerly the Chatham of the Merchants' and Miners' line, was bid in by that company for $175,000. The Scipio brought $50,025, and was purchased by Lewis Luckenbach, of New York. The Niagara, of the Ward line, brought $75,063 and was bid in by President H. P. Booth. The yacht Enquirer, formerly owned by W. J. Connors, stevedore and master-porter at Buffalo, was withdrawn from the sale.

It appears that the Cramps are obliged to exclude women from their shipyard, the ungallant excuse being that they attract too much attention from the men. "Well I'll tell you," smilingly said the official, when one of his friends pleaded for the admission of a gentleman he knew; "your friend outside is accompanied by two ladies. We have seven thousand workman in the yards, and all of them are busy. If we permit the ladies inside the gates, every one of the seven thousand workmen would lose a couple of minutes apiece in looking the party over, and you can easily figure up what such a loss of time would amount to. I am sorry for the ladies, but the rule cannot be broken. Every minute lost by the seven thousand workmen means the loss of five days' time."

Capt. Reed, master of the Canadian schooner Wawanosh, consort of the steamer Ontario, while loading on the 15th of this month at Nipigon river, Lake Superior, performed an act which is worthy of national recognition. A man, who was helping to load the vessel accidently fell overboard, being hit by a stick of timber. In his fall he sank instantly and rose once nearly to the surface. The captain saw that the man would drown if immediate and adequate assistance was not offered. Captain Reed at once plunged in after him and caught him by the top of the head. The drowning man had a tight cap on and in being raised to the surface the cap slipped from his head. He went down again like a stone. The captain followed and this time caught him by the hair and brought him to the surface. They were then thrown a line and the two men pulled on board. The man came to and in a few hours was not much the worse for his close call. It is quite within the province of the Dominion Minister of Marine to accept affidavits regarding this act of bravery and award Capt. Reed suitable recognition.

GRAIN SHOVELING AT BUFFALO.

CAUSES LEADING UP TO THE STRIKE OF THE GRAIN SHOVELERS—COST OF HANDLING GRAIN SINCE 1865. *

It is necessary to review briefly the changes in the grain shoveling business at Buffalo in order to properly appreciate the motives which led to the strike against the contractor in May, 1899.

The charges for shoveling grain at Buffalo were established, at least as early as 1865, at $4 a thousand on sail vessels, and $4.50 a thousand on steam vessels. When the steam shovels came into use, in the late sixties and early seventies, the charge was divided between the men and the shovels; that is the men received $2.25 cents per thousand, and the owners of the shovels the same while working on steam vessels, and each received $2 per thousand while working on sail vessels.

After the patent expired on the steam shovels, in 1882, 50 cents a thousand, which had been paid to the patentees as royalty, was thrown off by the elevators, and the charge became :

$4.50 for hand shoveling on steam vessels.
4.00 for steam " " " "
4.00 for hand " " sail "
3.50 for steam " " " "

All money collected for hand shoveling went to the men, as before. The steam shoveling charge was divided, the men getting the same amount as before the reduction, while the shovels got $1.75 on steam vessels and $1.50 on sail vessels. This charge continued until 1894.

In that year, after considerable trouble with the vessel men, who were anxious to get the charge reduced, the elevators made a reduction of 25 cents a thousand on the shovel charge on steam vessels, bringing it down to $3.75, of which the men had their $2.25 as before.

This brings the record down to 1895, when the first contract went into effect. Every reduction down to that year had come from the shovels and the pay of the men was the same as it had been for years. Up to this time all grain carried between decks or in the fantail holds had been figured as "hand shoveled," although the steam shovels were frequently used on the between decks grain. Under the contract the $1.50 to the shovels was paid on all grain elevated, whether from deck or hold.

The first contract, made as an experiment, and with not a few doubts in the minds of its makers as to its success, provided for the payment by the vessel of $3.50 a thousand flat, without regard to deck loads or class of vessel, and this amount was divided as follows :

$1.85 to the men, 15 cents to the contractor, and $1.50 to the shovels.

In order to compare the earnings of the men under the new plan with their earnings under the old system, it was necessary to make a careful study of the records for several years before the contract went into effect. Greater Buffalo has had this done, and the result is as follows :

Total cost to vessel, 1880 to 1893	$4.00
Earnings of men, average, 1880 to 1893	2.50
" " shovels " " " " "	1.50
Total cost to vessel, 1894	3.82
Earnings of men, average, 1894	2.50
" " shovels " "	1.32
Total cost to vessel, 1895	3.50
Earnings of men "	1.85
" " contractor "	.15
" " shovels "	1.50

From these figures it will be seen that the men, who had averaged $2.50 for many years, were cut by the contract to $1.85, while the shovels, which had received $1.50, with the exception of 1894, continued to receive the same amount, and were in fact paid 18 cents a thousand more on the whole number of bushels than in 1894.

The contract for 1896 was the same as that of 1895.

The contract for 1897 was for $3.35, divided asfollows :

$1.85 to the men, 15 cents to the contractor, and $1.35 to the shovels.

The contract for 1898 was for $3.10, divided thus :

$1.85 to the men, 5 cents to the contractor, and $1.20 to the shovels.

The contract for 1899 was made with the contractor at the same price as in 1898, but the contractor attempted to make a different division of the money, as follows :

25 cents an hour to the men, $1.20 to the shovels, and the balance to the contractor.

This schedule would figure out as follows : Cargo, 100,000 bushels ; 6 hours ; 75 men. Earn per man, $1.50 ; the gang earns $112.50.

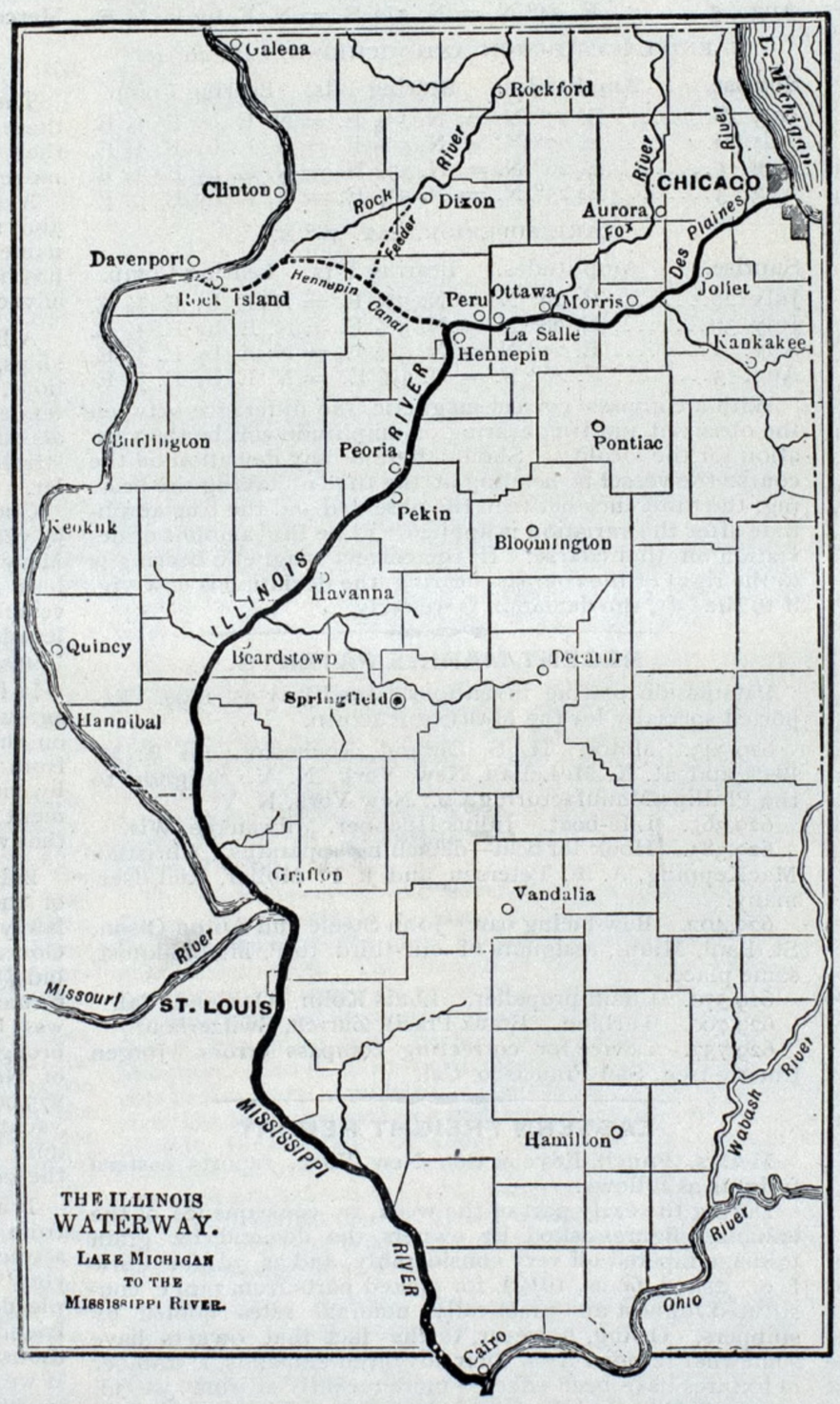
The contractor receives $190, of which $77.50 is profit. On this same cargo, the men would have received in 1898, $2.46 apiece.

In 1894 or any previous year, they would have received $3 apiece.

While this new schedule figures out as above on a single cargo, yet the delays and accidents of business would increase the time required to handle grain, and would on the average reduce the contractor's profit to about $50 on each 100,000 bushels. On this basis the men would receive about $1.90 apiece.

The result of this attempt to lower the wages of the men was a strike which tied up Buffalo harbor for three weeks. But this attempt to cut wages was not the only cause of the strike.

The shoveling charges were fixed, under the old system, by the union, of which every man who worked on the shovel



gangs was a member. The bosses were appointed by the elevator owners, and the gangs at different elevators were entirely independent of each other. This resulted in attempts by the gangs at the less-used elevators to secure business, and led to a system of rebates, which averaged about 50 cents a thousand bushels. This rebate was paid by the boss of the gang to the consignee or owner of the grain, to secure the sending of the grain to the elevator at which the boss worked. On a large part of the business, then, the men never received the full amount which the vessel paid; this was especially true of grain that came into Buffalo for canal shipment. The apparent reduction of the men's pay under the contract is thus shown to be more in the nature of stopping an old abuse than to be a real reduction.

The bosses were all, or nearly all, saloonkeepers, and from their saloons they made the larger part of their income, for they were only allowed one man's pay by the gang. There were, no doubt, many chances for the boss to deceive the men as to the amount of rebate which he had paid to secure a cargo, and many complaints were made that the bosses were robbing the men. In most cases these claims were probably based on a misapprehension of the amount earned, but there were cases where the bosses did contrive to line their own pockets at the expense of the men. It was, of course, understood that the men must drink at the saloon kept by the boss under penalty of dismissal, and while there were exceptions to this rule, they only served to point the moral more plainly.

Under the new contract, the same old bosses were for the most part retained, and this probably led to the continuance of some of the old abuses. At any rate, it was hard for the men to believe that the same bosses, who had formerly seized every opportunity to enrich themselves, had been converted to better ways in so short a time. While there was much grumbling among the men when the contract went into effect, yet the wiser course was followed, of trying the new system on its merits.

The abuses which were complained of, and which were no doubt more or less prevalent, were the carrying of dummies on the pay-rolls, the forcing of men to drink at saloons in which the bosses were interested, and the forcing of the men to obey the dictation of the bosses at the polls. While these charges were very hard to prove, yet there seems to be no doubt that these practices existed to a coniderable extent, and that the men suffered both in loss of pay and in loss of that freedom which is necessary to contentment.

The contractor promised to stop all these abuses in the spring of 1899, at the same time that he put the new rate of pay into effect, but the men struck at once without giving him an opportunity to prove his good faith.

A most annoying feature of the old scale of prices was the extra charge for damaged grain. The rates fixed by the Shovelers' Union applied only to sound grain, and a rate of from $8 to $20 a thousand was charged for grain in any way damaged. This extra charge went to the men and increased their earnings to a considerable extent. A very slight amount of damaged stuff was often made the excuse for charging extra rates on a large cargo, and the practice became costly to the vessels. Besides this, the shovelers would not work on certain vessels, which were built so that it was difficult to unload them, without extra pay. These extra charges. bringing the element of uncertainty into the business had more to do with the adoption of the contract than any other one cause. Of course, under the contract, all these extra charges were done away with at once, and it became possible for a vessel owner to figure accurately what it would cost to get his boat unloaded at Buffalo.

The result of experience with the contract system was very satisfactory to all parties up to spring of 1899. The cost of shoveling to the vessel was reduced from an average of $4.00 per thousand bushels, with an extra charge for damaged grain, to a flat rate of $3.10. The wages of the men were reduced from an average of $2.50, with extras, to a flat rate of $1.85, but their wages are now real wages, and no part has to be paid back to secure work. The shovel-rent was reduced from an average of $1.50 under the old system, to $1.20 under the new.

The strike of 1899 was, then, a protest against further reduction of pay, and was more formidable on account of the abuses which the old bosses had brought with them from the days of separate gangs and saloon influences. Under the settlement which was brought about by the Roman Catholic Bishop, the old abuses will have no chance to flourish, the pay of the men remains the same as before the strike, and an inspector appointed by the Bishop will see that the terms of the settlement are lived up to. The expense attending the strike, and the salary of the inspector, are to be paid by the Lake Carriers' Association, and for this purpose the shoveling charge has been raised from $3.10 to $3.13, the extra three cents going to pay these expenses.

*From the July number of "Greater Buffalo."

H. M. S. Hermes has carried out an eight-hours' trial to determine the power required to give the vessel her designed speed of 20 knots, the mean results of which were as follows: Steam in boilers 260 lbs. per square in.; steam at engines, 246 lbs per square in.; vacuum in condensers, starboard, 25.1 in., port, 25.2 in; revolutions per minute, starboard 174.4 port 176.8; i.h.p., starboard 4636, port 4557; total i.h.p., 9203; air pressure in boiler rooms, 0.10 in.; speed of vessel, 20 knots; and coal consumption, 1.54 lbs. per i.h.p. per hour.

THE ST. LAWRENCE CANALS.

There is a chance that the Canadian waterway system between the Great Lakes and the seaboard may prove inadequate to the end for which it was designed; that Canada's fourteen foot canals, when completed, may be found lacking in capacity for the transportation of the freights of the West, and that this is a fact that Canada is coming now to realize. The aspect of the case is strongly presented in the report of Consul Brush, representing the United States at Clifton, Canada, and now made public by the State Department. Consul Brush says.

The Province of Ontario is becoming alarmed over the seeming decadence of the Welland Canal and strong pleas are being made for harbor improvements at Port Colborne, its Lake Erie terminal. It is urged that the lack of harbor facilities at that port is largely responsible for the loss in traffic. The harbor is in the same condition that it was seventeen years ago, when the Welland Canal was opened. The lake vessels now require such a depth of water that none of the larger class attempt to enter Port Colborne.

"When the vessels became too large to enter the Welland Canal lightering was resorted to. The Grand Trunk Railway built a branch line parallel with the canal. Enough of the cargo was transferred to the railroad to enable the vessel to pass through the canal, and then the cargo was taken on again at the other terminal. This expedient has worked fairly well until recently; but in the meantime the lake vessels have been growing in size each year, and with each increase came lower freight rates, driving the smaller vessels out of competition. Steamers with 200,000 bushel capacity now control the grain carrying trade, and these cannot enter Port Colborne harbor. The vessels that can enter are growing less in number each season and soon even the expedient of lightering vessels will not suffice to bring traffic to the canal.

"While the Government admits the necessity of a better harbor, it seems unwilling to take immediate steps toward providing one. It is urged that it will prove of only temporary value unless the canal is enlarged as well, and if the canal is enlarged so as to admit the largest lake craft, there would still be heavy expenditurers required on the St. Lawrence route, which does not even have a 14-foot channel for its entire length, although that depth is expected to be secured this season.

"The Welland Canal, up to date, has cost the Government $24,173,352. Its best year in tonnage was 1893, when 1,294,823 tons of grain and merchandise passed through it East and West. Since then, the decline in grain shipments has been especially marked, although the grain traffic on the lakes increases every year. In 1893, the grain that passed down the Welland was about 16 per cent. of the grain receipts at Buffalo; in 1898, it was about 9 per cent., or a loss of 43 per cent. as compared with Buffalo. The grain that passed down the Welland last year was less than five years ago, while the grain receipts at Buffalo were nearly three times what they were ten year ago."

NEWFOUNDLAND FISHERIES.

There is quite a ripple of excitement going on just now between the French and British governments regarding the Newfoundland fisheries.

To understand the situation one must know that in 1713, when the French surrendered to the British their principal claims to Newfoundland under the conditions of the Utrecht treaty, the right of Frenchmen to fish and dry fish along the entire west coast and a part of the north coast was specifically reserved. During all these years the French have strenuously asserted their treaty rights. The west coast of the island is dotted with French stations, and even as far east as Cape St. John on the north coast the French have established themselves. Thus the French fishing industry has reached enormous proportions, giving employment at the present time to about 12,000 men.

The Newfoundlanders resent the encroachment of the French, and many times during the past quarter of a century armed conflicts have been narrowly averted. The French fishermen claim that they have never overstepped their treaty privileges, and stand npon their dignity, asserting that the Newfoundlanders, aided by British warships, are constantly harassing them almost beyond endurance.

Whether the cutting off of bait privileges was the result of a suggestion from the imperial authorities can only be conjectured, but it is reasonable to infer that the colonial government has decided to force an issue between France and Great Britain, hoping thereby to secure a speedy settlement of a dispute which has retarded the progress of Newfoundland, arrested the development of the west coast and practically shut the colonial fishermen out of the Grand Banks.

Last year the sailing-ship tonnage owned in Britain declined by 199,853 tons. In five years sailing vessels have decreased by 600,000 tons; but this is more than made up, even in mere tonnage, by the increase of steamers of from 78,000 to 250,000 tons yearly.

TORPEDO BOAT DAHLGREN.

The first speed trial of the recently launched torpedo boat Dahlgren took place Saturday last on the Kennebec River. She made a statute mile in 1 minute 45 seconds. Reckoned in knots the Dahlgren's speed was at the rate of 29.76 knots an hour. The Bath Iron Works contracted with the Government to give the Dahlgren a speed of 30 knots. She will make that and more, too, her builders say, when she is again put through her paces.

On Saturday's trial the screw made 304 revolutions a minute. They are capable of 325 revolutions. The Dahlgren will shortly be given her official trial over a measured course.

The Dahlgren is 147 feet long, 16.4 beam and 4.7 draught. Her engines have an indicated horse-power of 4,200. She is what is known as a sea-going torpedo boat, like the better known Cushing and Ericsson, although neither of the latter has near the speed possessed by the Dahlgren. They are capable of 22 and 24 knots respectively, while the Dahlgren's 30 knots is equal to the best speed contemplated for even the big torpedo boat destroyers of the navy. Some of the most modern of the latter class now building will not exceed the speed limit of the Dahlgren.

Japan has three boats building, in which a speed of 30:31 and 33 knots are called for. Great Britain's powerful and numerous fleet of tordedo boats contain fifty-three flyers, each capable of steaming thirty knots an hour. Among this fleet alone are several which attain a speed of thirty-three knots, while the speediest of the lot is one being planned to go thirty-five knots an hour.

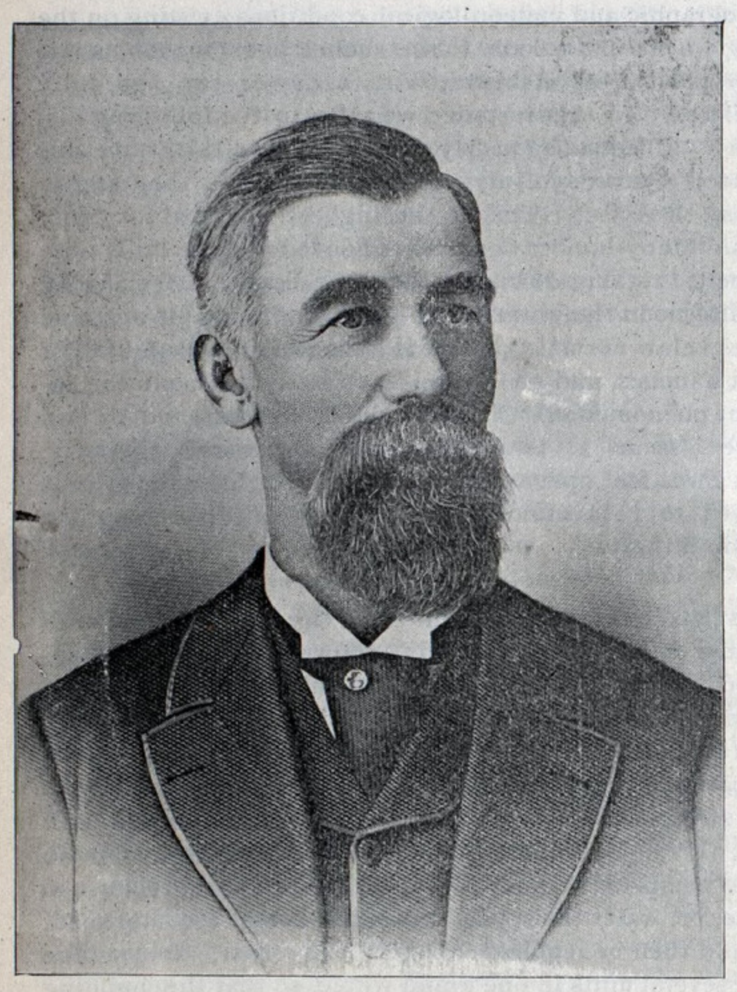
Great Britain has recently built for China the torpedo boat Hai Lung, which on a trial trip steamed 36.7 knots during an hour of a four hours' steaming trial. This is equivalent to a land measurement of 42.26 miles, equal to the speed of a fast train.

France has several boats which have steamed up to the thirty knot mark, but the majority of her large fleet of boats are knots behind the time made by the Dahlgren.

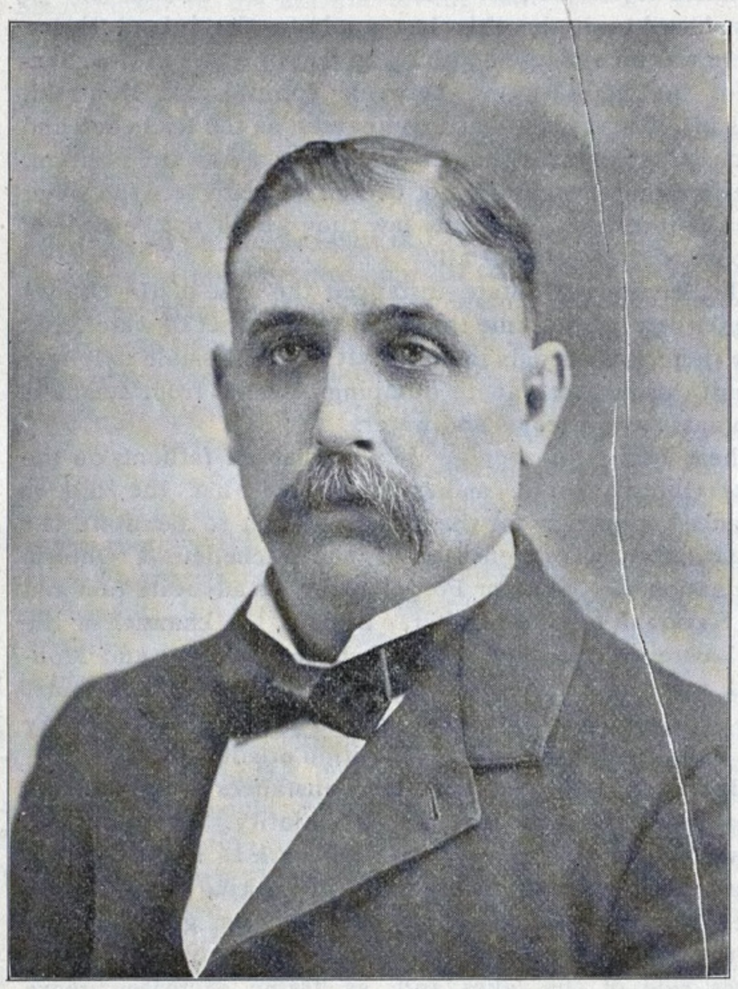
Italy has three thirty-knot torpedo craft. Germany's fastest boat travels 28.5 knots; Russia's fastest torpedo boat is the Sokol, 29.7 knots.

Uncle Sam's fleet show a greater uniformity of speed ability than any other nation, most of the boats possessing a speed of thirty knots or very near that figure.

The Turbinia, the latest acquisition to the British fleet, and built under a radically different engine plan than any other vessel, has attained a gait which beats the best of them.



CAPT. JAS. DAVIDSON.
West Bay City, Mich.



CAPT. W. A. COLLIER.
Manager Vessel Owners' Towing Co., Cleveland.

MR. T. F. NEWMAN.
General Manager C. & B. Line of Steamers, Cleveland.

The accompanying engravings are from the photographs of the Appraisers and Executive Committee of the Great Lakes Towing Co. A valuation having been placed on tow boat property at all lake ports a combination of interests has been formed.

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CLEVELAND, O., JULY 27, 1899.

IRON ore is king! The watchword is rampant on the akes. Hurry along the iron ore, ore, and always more ore.

THE American Ship Building Co., Cleveland, will do itself proud on Saturday, August 5, by launching about a thousand feet of high classed steel construction from their ship yards at Cleveland and Lorain, O. The honors are to be equally divided between each port, and, there is more to follow.

OH, the remorse of conscience suffered by those who chartered their tonnage too far ahead, and are now raising Cain toting cargoes for nothing. For nothing? Well! There may be a stepmother's scraping of butter on the johnny cake, but there is no gilded gingerbread falling to their share.

Cause and effect are sometimes remotely connected. The Inter Ocean, Chicago, traces the earthquake shock felt in Los Angeles, Cal., to Lake Superior, and makes no doubt but that the three feet tidal wave felt in Ashland Bay this week was indirectly the result of the earth quaking in Southern California. Perhaps so, too?

SOME pessimistic views, recently expressed, seemed to father the idea of consolidating all of the best tonnage outside of that owned by the railroads, owners of iron ore mines, mills and furnaces. Now comes along an optimist who sees every good in consolidating the whole lake tonnage, the business to be directed, carried on and wound up by and from a central office or clearing house. In considering matter, of this sort it is usual to look for a precedent which may in some manner aptly fit the, or any suggested innovation. Not finding any parallel case in the annals of shipowning, the mind reverts at once to the other great artery of commerce, viz., railroads, and in this direction, as in shipowning, we find an abundance of adequate competition. To argue against a union of interests is like trying to prove that labor saving devices are inimical to the best interests of the sovereign people, the, or any community. The rage for, and age of combinations has never been brought so prominently in the foreground as at present, and, he would be a wise man indeed who could logically assure us of the final outcome of this apparent craze or wave of scientific, industrial, technical and professional momentum now enforcing a consolidation of interests in all branches of financial pursuits.

SHOALING THE LAKES.

Rather a spirited discussion took place in the Dominion Senate on Monday last on the subject of dumping ashes or other refuse or waste in the inland waters.

Senator Forget said that the Richelieu & Ontario Navigation Co. had just constructed a steamer which threw out the ashes as she went along. She would, if the bill became a law, have to be be taken off the route. She burned 60 tons of coal in 28 hours.

That is rather steep burning of fuel for a Lake Ontario steamer, yet, that is beside the question. What we now want is a smart statistician who can figure the displacement of a million tons of the various grades of fuel reduced to ashes, then apportion to each lake route its pro rata share of the expense for dredging at decennial periods, or more frequently if desirable. A beneficial feature in this connection is the fact that steamboat routes can be projected on all charts, so that when any vessel is doubtful of her position, from any cause, she may sound for ashes, being careful only that she is not on a divergent highway by the ash route.

To come back to the Dominion Senate, we find that the House went into committee on the bill "to reduce the depth into which it was prohibited to dump refuse in navigable waters from 12 to 7 fathoms." Senator Forget, the representative of the largest steamboat line in Canada said "it was absurd to make this law apply to the inland rivers. There was an average depth of 42 feet of water in the channel of the St. Lawrence between Toronto and Montreal. This bill would place such companies as the Richelieu and Ontario Navigation Company in a very awkward position. They were always careful not to dump ashes where the water was shallow, but under this law they would not be able to dispose of their ashes at all.

The Secretary of State instanced the case of the Ottawa river, where at one time there had been 20 feet of water, and now there was only six in places. It was impossible to longer permit this indiscriminate dumping of ashes from steamers into navigable streams and waters.

There being an average depth of seven fathoms on the Lake Ontario route, makes it appear that the bill is advanced expressly for the benefit of and to facilitate the dollar-grabbing propensities of the Richelieu & Ontario Navigation Co., Senator Forget being its advocate first and the National Legislator after. Besides, the channel of the St. Lawrence does not extend between Toronto and Montreal, nor can he keep in territorial waters on that route. The United States Secretary of War has something to say and do in the event of such a question arising.

There are, however, too many instances where private interests overbear the rights of a majority. International, as well as neutral natural waterways are as free as the air, to use, but not abuse, in the sense of making them impassable. Too little attention has perhaps been given to this feature in the short and shoal water routes on the United States side of the lakes, and, as traffic increases, more adequate and inclusive rules should be laid down for the guidance of those engaged in such a trade.

It may not be necessary at this time to insist upon all ashes and other waste refuse, when accumulated between certain points, being landed, yet, in the absence of stringent rules regulating the dumping of ashes, etc., the supposition or belief may gain ground, that the waters of the lakes are being shoaled through the ignorance or carelessness of those traversing them.

There is every evidence that the purely natural sentiment and feeling still exists (as it has done and always will) that sufficient for the day is the evil thereof, or, rather, that if the ordinary methods will suit our time that is all we care about. The stronger this feeling is known to become, the more are we bound to throw such safeguards around the conditions as to conserve for posterity the same privileges which we have enjoyed, and, by all means in our power strive to enhance same, at least such is the province of our form of government, of, from, by and for the people.

WE may once more repeat that the fleet of vessels recently permitted to load cargoes of grain were not re-classed, their class and rating was not changed at all. There should be no mistaken impressions about the class and rating part of that story, as the RECORD made it clear enough several issues ago, we also briefly explained, in part, what a vessel's class meant to her owner or underwriters. Ratings can not be changed unless mistakes are made, at the same time it appears that shippers can make terms with underwriters regarding a vessel's ability, and this too, without a change of class or a consultation requesting the acquiescence of the owners of floating property. An improvement in freights calls for more tonnage, hence, those who were pronounced unfit, are found fit, whether the owner wants it or not. However, as it is mostly want, with the owners, they had no need to be looked to, to do what the other interests could do for themselves, mostly themselves. The owners of the smaller class of floating property know whether their boats have been chalked up or not, in rating as well as valuation. The owners of large, valuable fleets of high classed steel vessels won't interfere in any case, they don't know or care what is done with the other man's property, unless the doing of it touches their own pockets, then they'll want to know all about it. The moral to this episode is that in classing vessels on a scale of valuations, the value of vessels when business is depressed and freights low should not be chalked down so low as to influence underwriters, for, and as in the present case where a fleet of three or four score of vessels were concerned, freights might, perchance, fluctuate occasionally, whether the hulls were rated up to a re-valuation or not.

Now that we have several governmental scientific departments, whose province it is to study, explain and disseminate useful information relative to the physical geography, hydrographic and meteorological conditions existing on the lakes, we naturally look to see such a phenomenon as was telegraphed from Ashland, Wis., a day or two ago, fully ventilated. In this instance we refer to the following dispatch: "Chequamagon Bay was visited by a tidal wave this forenoon, Saturday, July 22nd, which raised the water in the bay three feet. This is the highest recorded for many years. Many lumber docks were flooded and the mills were compelled to shut down for the time being. At 3 o'clock this afternoon the water had dropped again until it was nine inches below normal." Here is a maximum rise and fall of 3 feet 9 inches, and no reason is offered to explain the apparent phenomenon. Ordinary squally weather, and, or rain showers, seems to be heralded with increasing regularity, but a three feet upheaval of the surface of Lake Superior is allowed to pass unnoticed, or, rather, this has been the fashion hitherto.

INSTEAD of immediately enrolling the individually owned tonnage on the lakes in a syndicate form, as has been suggested, would it not be a more possible matter to corral the several large company fleets under one management? Then the fleets owned by the various railroad lines, known as "package freighters." After that it might be advisable to have attention turned to the several passenger lines on each lake; this indeed would be a fruitful field, as there is more or less competition, and, in some instances, a good chance to inflate, or, water the stock. So much being accomplished, it would then be required, or at least in order, to combine these several units in one grand whole, so that the building and handling, including underwriting, wrecking, repairing, etc., might all be controled by a central bureau of shipping and commerce. In fact, the possibilities are too enormous and far reaching for our limited space to enumerate at this time. Let's all combine!!!

A 700 FOOTER.

A dispatch has gone spreading over the country this week stating that a steamer 700 feet in length would be built by the Cramps, of Philadelphia, to the order of the International Navigation Co., for the Atlantic trade.

It is announced that sister ships of 610 feet in length will first be built, to be followed by the leviathan.

In 1894 and 1895 the St. Paul and St. Louis were built, the first frames being raised July 27, 1893. The length over all was 554 feet 2 inches and their gross tonnage was 10,700. Twenty knots was the speed developed, and Americans applauded the skill of the Philadelphia shipbuilders.

Now, after the lapse of five years, the same firm, under the impetus of favorable conditions, again assumes the pleasing task of upholding and asserting the genius of American workmen by constructing ships that will rival in size and speed the greatest and fastest vessels e er built.

A dredge designed to facilitate navigation, to be used in deepening harbors and channels, and removing obstructions from navigable rivers, and to bear afloat heavy machinery for that class of work, may become subject to a maritime lien McRae vs. B owers Dredging Co., 86 Fed. Rep. 344.

LAKE FREIGHTS.

As the $1 ore rate from the head of the lakes was stiffening, along came a slump of ¼ cent in grain, and strikes at the Conneaut, Ashtabula, Erie and one Cleveland ore dock, has not made the freight situation any brighter. The tonnage diverted from the ore trade, through the strikes at discharging ports, going to Chicago for grain, is responsible for the reduction in grain rates, which shows how susceptible the freight market, and how closely watched the lake tonnage is. The actual flat rate on ore is still held at 90 cents head of Lake Superior, 85 cents Marquette, and 75 cents Escanaba.

Corn, Chicago to Buffalo, which it was thought could not get lower than 2 cents, dropped this week to 1¾ cents, the same rate to Port Huron and Midland, with plenty of bottoms in sight and chartering brisk.

The continued strike at ore receiving ports has not only affected grain freights, but has also placed more coal tonnage on the market for up freights, and the 5 cents raise to Milwaukee is hanging fire again, so as to make rates 55 cents Ohio ports to Lake Michigan, and 60 cents from Buffalo. Lake Superior 40 cents all round, except to side ports, which are 10 cents better, Portage and Ft. William, with Ohio ports holding out for, and in a measure claiming, 60 cents, as a going rate to Lake Michigan.

There is every indication that the ore discharging strike will soon be settled, the fact remains that whether one hundred or one million tons less than was suggested as the season's work is carried or not, iron ore is wanted and must be brought forward in spite of labor flurries. Coal will also have to be shipped in increasing quantities, and there is no reason why grain rates should not hold up in the fall as usual. Lumber rates are firm at $2.25 per M feet to Lake Erie ports, and the schooner trade in coal to river and light draft ports, is brisk, with rates to the Rivers firm at 35 cents, instead of fluctuating as they have done from 20 cents to the higher figure, as occasion demanded.

LAUNCH OF THE GERMANIC.

The wooden steamer Germanic, built to the order of the Northern Navigation Co., was successfully launched from the yards of the Collingwood Dry Dock and Wrecking Co., Collingwood, Ont., on Thursday last. A large number of prominent citizens witnessed the launch, including Mayor Chamberlain, with Alderman H. Y. Telfer, James Guilfoyle, H. Lamont, F. W. Bryan, and D. Wilson represented the corporation, and Messrs. J. J. Long, Vice President C. E. Stephens, Treasurer Charles Cameron, F. A. Lett, of Barrie, directors; C. A. MacDonald, general passenger agent, and A. B. Pratt, general freight agent of the company.

Miss Muriel, the pretty little daughter of Mr. C. E. Stephens, performed the baptismal ceremony, breaking the customary bottle of champagne and pronouncing the words "I christen this boat the Germanic of Collingwood."

The interest and importance of the occasion was increased by the announcement of Vice President Long that the steamship company had increased their capital to $1,000,000, and the unexpended $600,000 would be used in building large vessels, suitable for the requirements of the increasing volume of trade; also that in conjunction with the dry dock company they had in view the establishment of a large ship building industry that would give constant employment to 300 or 400 men.

The Mayor, in presenting a handsome set of colors on behalf of the corporation, expressed the pride and appreciation the town felt in the company's push and energy in building such a grand, staunch vessel. He believed it would bring increased prosperity to the company and increased trade to the town.

The Germanic's keel was laid on April 6, and notwithstanding the difficulty in obtaining men, the vessel was completed in a little over three months. The steamer's dimensions are 190 feet over all; beam, 32 feet; and depth of hold, 12½ feet. She will draw about 11 feet and have a registered tonnage of 1,300. Her hull is entirely of white oak, steel strapped and arched, with steel deck beams. She is classed A1 for ten years. There are watertight bulkheads forward and amidships. The engines are 24-inch double steeple compound, supplied with steam from a Scotch-type boiler, allowed 100 pounds pressure. The steamer is also supplied with steam steering gear, hoisting machinery and capstans of the most improved pattern. The dining saloon and parlors are roomy, and tastefully and elegantly furnished. There is stateroom for 200 first-class passengers and ample steerage berths below; splendid smoking rooms, bath rooms, etc., to complete the requirements of an up-to-date passenger steamer. Electricity is used for all lighting, and there are over 200 lights operated by a dynamo and switchboard in the engine room.

On the upper deck is a magnificent promenade 100 feet long, provided with seats and awnings. The safety of passengers in case of accident is looked after by a full supply of life-preservers, buoys, and five metallic lifeboats of the latest design.

The first trip of the new steamer will be to Mackinac on Friday, July 28th.

RAN THE RAPIDS.

The new steel steamer Mae, recently built by the Craig Ship Building Co., Toledo, to the order of the Porto Rico Steamship Co. (Miller, Bull & Knowlton), New York, ran the St. Lawrence river rapids in safety in charge of the Calvin Co. steamer Chieftain and arrived all well at Montreal on Thursday last.

Much credit is due the Calvin Co., Ltd., and their manager Capt. A. Malone, Kingston, for the skillful work they are enabled to do through having a valuable equipment for towing, wrecking and salvage, as well as a staff of competent employes to carry out instructions.

With the deepening of the St. Lawrence system of canals there will be a greater opportunity than ever before for the employment of the skillful towing and pilotage facilities already established at the foot of Lake Ontario.

A CENTRAL AMERICAN CANAL.

The advocates of the Nicaragua canal scheme are pleased that the commission is favorable to their route, and will so report. They say that there can be no objection to the commission's trip to the Isthmus of Panama, as the minds of the members are already made up. If this were true, it would not be complimentary to the commission, which is appointed to make an honest investigation of all the routes and give an impartial decision. A majority of the members may be partial to the Nicaragua route at present, but the investigation has not been made. It is possible that some of the commissioners may see reasons for a reversal of judgment.

Certain distances have been collated to show that the Nicaragua route will be shorter than the Panama for American trade in some directions. The figures though are somewhat misleading, but even if they were correct they would prove nothing. The United States will not build an interoceanic canal at a cost of several hundred millions of dollars for the American trade alone. It would be more sensible to put the money into ships and first create a merchant marine, which could use a canal. The merchant marine of the United States which would pass through the canal for years after it was built would not pay the salaries of the canal officials. To make such a canal successful the merchant marine of the world must be induced to use it, and a canal at Panama would be much more convenient.

The Nicaragua people say that their route would be shorter for the Central American trade, and that it does not matter about South America, as the trade in that direction amounts to very little. The Nicaragua scheme has been kept alive by arguments like these. An American vessel in the Central American trade on the Pacific side is about as rare as snow in August. The trade with South America is great, and growing all the time, but, like the Central American trade, it is done chiefly in European vessels.

NOTICE TO MARINERS.

LIGHT-HOUSE INSPECTOR'S OFFICE,
TENTH LIGHT-HOUSE DISTRICT,
Buffalo, N. Y., July 26th, 1899.

Notice is hereby given that the light in Maumee Straight Channel, Inner Gas-Buoy, No. 30, Maumee Bay, which was temporarily discontinued May 2, 1899, for repairs to the lamp, was re-exhibited on July 25th, 1899.

FRANKLIN HANFORD, Commander, U. S. N.
Inspector 10th L. H. District.

VESSELS CLASSED.

Vessels classed and rated by the American Bureau of Shipping this week in the "Record of American and Foreign Shipping" are as follows: Screw, Mae, owned by Messrs. Miller, Bull & Knowlton; schooner, Louise Hastings, tern (3 mast schooner) Alverda S. Elzy; tern (3 mast schooner) Roger Moore; British schooner, Brenton; British tern, Wanola; British topsail schooner, Foster Rice; Swedish brig, Mathilda, and Portugese half brig, Luso.

ANOTHER LARGE EASTERN SHIPYARD.

The New York Ship Building Co., by the completion of a contract with the Manufacturers' Land and Inprovement Co., of New Jersey, for the purchase of a large strip of land at the southern extremity of Camden, on which they will erect a plant capable of competition with the best shipyards of the United States and Europe, proved the contention, that the banks of the Delaware River are unrivaled in the advantages they offer for construction of ships.

When the company decided to build the shipyards, the original intention was to put their plant in the harbor of New York. Hence the name of the corporation. But after extensive borings in that locality the directorate came to the conclusion that while the harbor of the metropolis was far the superior, in regard to shipping, of any on the Atlantic coast, it was not equal to the requirements of a modern shipbuilding yard. The survey made by company's engineers then located the site at Camden, which has a frontage of 3,500 feet and a depth of water at low tide of forty feet; and its purchase was recommended.

A prominent officer of the new firm stated "that the yard will be designed to build all classes of ships from a model yacht to the largest liners and battleships, and there will be facilities to make them all that they should be. In the location of this yard, careful examination was made of almost every conceivable harbor on the Atlantic, and I must tell you that in all things we have found the Delaware just what was wanted."

Henry G. Morse, formerly the president of the Harlan & Hollingsworth Co., of Wilmington, is president of the New York Shipbuilding Co., and the directorate is composed of A. W. Mellon, president of the Union Insurance Co., of Pittsburg; James H. Lockhart, a member of the Standard Oil Co.; Michael Jenkins, president of the Merchants' and Miners' Transportation Co., of Baltimore; Henry Walters, president of the Atlantic Coast Steamship Co; J. Craig Smith and Myron C. Wick, two prominent capitalists of Youngstown, O. The company is chartered under the laws of Pennsylvania, with a capital of $3,000,000, which will very likely be largely increased.

THE MINNESOTA VESSEL TAX.

The lake transportation companies which have registered their tonnage from Duluth to avoid excessive taxation are not worried over the recent opinion of John C. Richberg, attorney of the Cook county, Illinois, Board of Assessors, that the Minnesota tax law on tonnage is unconstitutional. From Duluth comes the assnrance of Senator Spooner, father of the bill, that it will stand a test in any court owing to the fact that in Minnesota there is a constitutional provision which gives the legislature power to enact tax laws of this kind. The enactment which has proved such a great source of gratification to several of the vessel owners is as follows:

"Section 1. In consideration of an annual payment into the state treasury by the owner of any steam vessel, barge, boat, or other water craft, owned within this state or hailing from any port thereof, and employed in the navigation of international waters, of a sum equal to 3 cents per net ton of the registered tonnage thereof, such payment shall be received in lieu of all taxes and said steam vessel, barge, boat or other water craft shall be and the same is hereby made exempt from all further taxation, either state or municipal, upon the payment of the sum herein provided.

"Sec. 2. The owner of any steam vessel, barge, boat or other water craft, hailing from any port of this state, 'and employed in the navigation of international waters,' desiring to comply with the terms of this act, shall annually, on or before the first day of July, file with the state auditor a verified statement in writing containing the name, port of hail, tonnage and name owner of such steam vessel, barge, boat or other water craft, and shall thereupon pay into the state treasury a sum equal to 3 cents per net ton of the registered tonnage of the said vessel, and the treasurer shall thereupon issue a receipt therefor.

"Sec. 3. The state treasurer shall annually, on or before the first day of December, pay into the county treasury of any county wherein is located the port of hail of any steam vessel, barge or other water craft complying with this act one-half of all money so received from any vessel or other water craft whose port of hail is within said county.

"Sec. 4. This act shall be in force from and after its passage." The bill was passed in April, 1895.

APPEAL in Admiralty—Review of Questions of Fact.—Where the evidence in a suit in admiralty is taken before an examiner, the decision of the trial court on questions of fact is not entitled to the same controlling weight as where the judge saw and heard the witnesses testify, and will be more readily reviewed by an appellate court. The Sappho, 94 Fed. Rep. (U. S.) 545.

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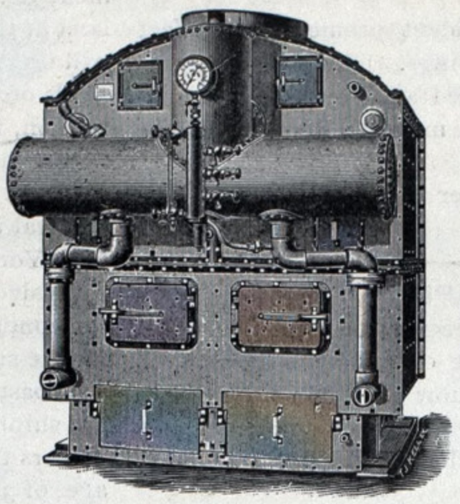

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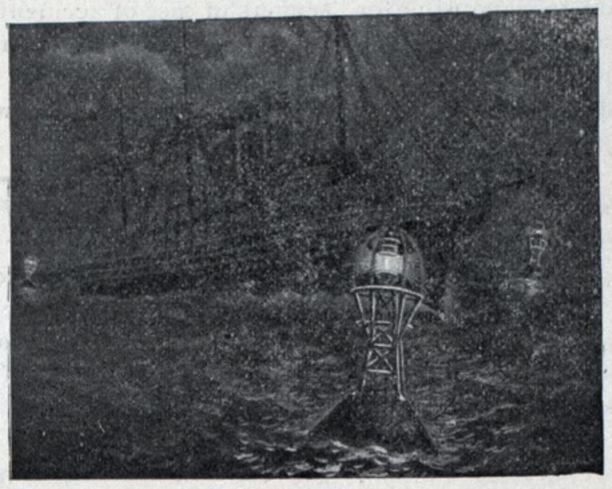

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SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

A claim by a tow against her tug for damages from coming into a collision with a third vessel because of negligent towage is a claim in tort standing upon the same ground as a claim of the third vessel for damages against the tug. The John G. Stevens, 18 S. Ct. Rep. 544.

Where by one series of operations the cargo is salved, and by another the ship, it is proper for the salvors to bring separate proceedings against ship and cargo, and for the court to award separate sums, each bearing a different ratio to the amount salved. International Navigation Co. vs. The St. Paul, 86 Fed. Rep. 340.

Under Act Congress 1884 (23 Stat. 57, §18), fixing the liability of shipowners, a part owner, having a claim presented against him, may bring in all creditors, and distribute to them his proportion of their demands, and may have an injunction to restrain future suits. Hanschall vs. Swan, 51 N. Y. Supp. 42.

A party advancing money to the master of a ship, without its owners' knowledge, would not have a personal claim against its owners, but a claim in the proportion that each individual share bore to the whole liability, as provided by Act Cong. 1884 (23 Stat. 57, 18). Hanschall vs. Swan, 51 N. Y. Supp. 42.

The foundation of the rule that collision gives to the party injured a jus in re in the offending ship is the principle of maritime law that the ship, by whomsoever owned or navigated, is considered as herself the wrongdoer, and subject to a maritime lien for the damages. The John G. Stevens, 18 S. Ct. Rep. 544.

Ballinger's Codes & St. Wash. §5953, which provides that "all steamers, vessels and boats, their tackle, apparel and furniture, are liable," etc., creates liens upon ships and vessels for services, supplies, and work done and furnished within the state, without regard to the residence of the owners of the vessels. McRae vs. Bowers Dredging Co., 86 Fed. Rep. 344.

Where the operations of the salvors in righting and securing a stranded vessel save the cargo, valued at $2,000,000, from a risk to which it was fairly exposed, and the cargo is then removed by them, the compensation should be for salvage, and not merely the cost of lighterage, and an award of $28,987.52, though the most liberal, will not be disturbed on appeal. International Navigation Co. vs. The St. Paul, 86 Fed. Rep. 340.

In order to justify a conviction under Rev. St. §5347, imposing a penalty upon the master or other officer of a vessel who witholds suitable food and nourishment from the crew, each of the statutory elements of lack of a suitable food supply, absence of a justifiable cause, and the presence of malice, hatred or revenge, must be found beyond a reasonable doubt. United States vs. Reed, 86 Fed. Rep. 308.

Lien—Repairs of Vessel—Materials.—Repairs to a vessel, and materials furnished in making same, will sustain a maritime lien, though the owner of the vessel was absent and unknown, where the repairs were made on the credit of the vessel, and were necessary, and such as would have been made by a reasonably cautious business man under the circumstances The Clara A. McIntyre, 94 Fed. Rep. (U. S.) 552.

The services of the engineer, fireman, deck hands, and captain, who work on board a dredging vessel, and mechanics employed in keeping the machinery in repair, the pipe men engaged in laying, connecting, and moving the lines of pipe, and the laborers engaged upon and about the filled area, are required in the prosecution of the work in which the vessel is employed, and they have maritime lien for wages, McRae vs. Bowers Dredging Co., 86 Fed. Rep. 304.

The master of a ship pledged his vessel, freight, and owners for the payment of money advanced for wages, supplies, etc., giving a draft payable after arrival and discharge. Before reaching its destination the ship became disabled, and was repaired by money raised upon bottomry, and was sold to satisfy same. Suit was instituted on the draft, held, that by the creation of the prior liens the holder of the draft lost his lien upon the vessel and freight. Hanschall vs. Swan, 51 N. Y. Supp. 42.

Where a stovedore's employe was injured by the falling into the hold of bags of freight from the sling, and the evidence showed that the accident was due to the combined carelessness of the employees on the barge from which the freight was being taken, of other employees of the stevedore, and of a seaman employed by the winch, together with some negligence on the part of the injured person himself, held, that the ship was not liable, especially in the absence of any evidence of want of care by the master or owners in selecting the winch man. The Joseph John, 86 Fed. Rep. 471.

PLANT FOR DREDGE WORK.

Abstract of proposals for hire of one or more dredging plants on the Ohio river opened July 19 at the U. S. Engineer Office, Cincinnati, O., Major Wm. H. Bixby, Corps of Engineers, U. S. A., in charge.

BIDDERS	Price Per Day. Dredgeboat and three Dump Scows.		Price Per Day. Towboat.	
	At Work.	Inactive.	At Work.	Inactive.
C. I. McDonald, Pittsburg, Pa....	$90.00	$65.00	$35.00	$25.00
Wm. A. Kirk, Madison, Ind....	40.00	35.00	30.00	25.00
H. S. Brown, Quincy, Ill	40.00	35.00	25.00	20.00
C. Jutte & Co., Pittsburg, Pa....	84.00	54.00	40.00	35.00

In the foregoing bids H. S. Brown, Quincy, Ill., is the lowest bidder in the aggregate and the district engineer will submit the bids to Washington for ratification by the Chief Engineer, U. S. Army.

VISIBLE SUPPLY OF GRAIN

As compiled for THE MARINE RECORD, by George F. Stone Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo	1,437,000	1,438,000	525,000	10,000	201,000
Chicago	5,678,000	3,464,000	602,000	309,000	144,000
Detroit	200,000	25,000	10,000	10,000	.....
Duluth	4,861,000	43,000	93,000	17,000	35,000
Fort William, Ont.	1,800,000	.....	.....	.....	.....
Milwaukee	58,000	3,000	.....	.....	10,000
Port Arthur, Ont.	200,000	.....	.....	.....	.....
Toledo	1,700,000	696,000	51,000	1,000	.....
Toronto	68,000	.....	10,000	.....	13,000
On Canal	623,000	34,000	498,000	.....	159,000
On Lakes	963,000	1,792,000	731,000	26,000	114,000
Grand Total	36,013,000	13,327,000	4,699,000	611,000	829,000
Corresponding Date, 1898	9,382,000	18,671,000	4,270,000	484,000	350,000
Increase	1,461,000	693,000	.....	.....	131,000
Decrease	.....	.....	94,000	120,000	.....

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

NOTES.

ARTICLES of incorporation have been filed at St. Louis by the Scullin-Gallagher Iron & Steel Co. It is the intention of the incorporators to erect the largest and most complete steel plant in the west. The capital stock of the company is $500,000, but it is said that as soon as arrangements are perfected the stock will be increased to $5,000,000. John Scullin, the street railway magnate; Harry Scullin, his son; Thomas M. Gallagher, and a number of other prominent St. Louisans are behind the venutre. Over 800 men will be employed at the start, but it is expected that the force will eventually be large. Incorporators of the new company say that they have organized to do an independent business and believe that they can do a profitable business by fighting the steel trust.

THERE seems to be some confusion in the popular mind as to the meaning of the term "squadron" as distinguished from that of "fleet." A voluntary correspondent of the New York Times rightly has noted that the word "fleet" may be used to signify the whole navy of a country, while a squadron is part of a fleet. In naval tactics, however, the word fleet means any body of warships numbering twelve or more ships of the line, namely, battleships and first-class cruisers. A fleet is divided into three squadrons, known as the van, the center of the rear. The senior flag officer, under the fleet commander, commands the center; the next in command the van, and the third the rear—whence the term Rear Admiral. These are not distinctions of vital importance to the wayfaring man, and the popular definition of fleet and squadron will do well enough for ordinary usage. But in view of the events of 1898, perhaps we ought to try to make our general acquaintance with naval terminology equal to our naval standing.

TWO years ago we gave a notice of the first edition of Mr. Walton's book, "Know your Own Ship," price, $2, and the fact that a fourth edition has now been issued shows that the work has been greatly appreciated by the class for whom it is more immediately intended. The volume forms one of Messrs. Griffin & Co.'s nautical series of hand books, edited by Mr. Edward Blackmore, for the use of officers of the merchant service, students in naval architecture, and others interested in the mercantile marine. The work contains a clear and simple explanation of the stability, trim, construction, tonnage and freeboard of ships, together with a fully-worked-out set of the usual ship calculations (from drawings), and has been specially arranged for the use of ship's officers, superintendents, engineers, draughtsmen and others. This fourth edition has been enlarged as compared with the first, and there can be no question that the additional matter now given in the book will be thoroughly appreciated. Considerable additions have been made to the chapter dealing with the subject of water pressures, and to the chapter on water ballast, to illustrate which numerous new diagrams have been inserted. The chapter on trim is entirely new and in the form of a paper was read before the Shipmasters' Society in London. The other sections of the book have been revised, and as far as possible brought up to date. The book is of a handy size, clearly printed, and there are over 140 diagrams, etc., throughout the text. We notice that Mr. Walton is engaged on a companion volume, "Construction and Maintenance of Steel Ships," in which suggestions involving details of ship construction are to be fully dealt with.

SKY PILOT TALK.

At the recent annual convention of the Christian Endeavor Society, held in Detroit, Miss Antoinette P. Jones, of Falmouth, Mass., a prominent worker in this branch of the Endeavor cause, made the following address :

When, last year, naval triumphs filled our thoughts, our brothers on the sea were hailed heroes indeed. None the less were they heroes, previous to the war, in their life of isolation on their ships before the red fire of battle glorified them, nor since, after hardship and depression has succeeded.

No previous knowledge of sailors or the sea is necessary, but a thorough consecration, tact, some experience in evangelistic work as a soul winner and prayerful judgment are all needed.

In each port the work must be adapted to existing conditions. In some ports the work converges to a comparatively small point, while in another port it is extended along many miles of frontage.

Where work has already been established and has right of way, it should be cordially respected and no plans made which will encroach on their field. Usually such work and workers can be materially benefitted by the Christian Endeavorers assisting in the regular services.

Almost immediately a necessity is forced upon you for a regular meeting place, a reading room, or a "home."

While the men from ships can be cordially invited to regular church services, these do not usually afford the time nor variety, nor freedom for personal work that gospel services do, arranged to meet the special need of the sailor.

Hospitals and barracks, more easily reached with regular services and visitation, afford grand fields for personal work, as some of you have experienced. How much is a home needed by a sailor who comes into a great city alone, without friends save the saloonkeeper. I want to tell you what "Bill" says, and he knows :

"Jack isn't as bad as he is put up to be. Of course there are good and bad in every flock, but a man in a uniform is more noticeable than a man in ordinary dress. If you want to win a sailor to Christ, love is the only way to conquer. Take him by the hand and lead him home. But first you must have a home he feels he is welcome in.

"Have something different from what he comes in contact with on shipboard. Put him on a level with men who stay ashore and don't go to sea to defend the country's honor. Treat him as a man, and he is as good as the one who stays at home and never sees life in foreign climes.

"The reason he goes to the bar for grog is because he has no other place to go, as a rule, and the saloonkeeper gives him the glad hand, and Jack, being afloat in a strange land, is easily led by the invitation, for he is like a ship without the rudder, adrift in a strange land with nowhere to lay his head. If there is a home and some one to bid him welcome, he is just as easily led to the good as he is to the bad, if you catch him in time, before the land sharks grab him.

"So, when you have him in tow, make him comfortable and make him feel welcome. Let him have a good meal, for Jack likes something nice and tasty. Then a nice warm room to sit in and read in and write a letter, the ink and paper right at hand for him, and then he is landed, provided you have for him a nice, clean, soft bed for the night. If you haven't the bed clean and soft, no good having the rest, for that will knock him off his course quicker than anything else, and off he will go on another tack, and of course no other place than a rum shop.

"In he goes, gets all in a muddle, and don't know where he lies and don't care, for he knows he is away from home and friends, with no one to care for him, and he thinks he is making the best of his time. Therefore, he is lost, when a good bed and home might have been the means of bringing him to the Saviour, and putting him on the road to the 'Home, Sweet Home,' where he would meet his friends, never more to part."

Do you know what an average sailors' boarding house is like? Then investigate. Would it be a suitable "home" for your own brother? Ask the Lord what you can do toward founding a real "home" in your home city.

TRANSFERS OF VESSEL PROPERTY.

Among the recent transfers of vessel property are the following: H. A. Root—Ralph C. Brittain, of Saugatuck, to A. R. Colborne, of Michigan City, the whole, $1. Steamer Music—J. C. Post and others, of Holland, to Herman Slingerland, of Manistee, the whole $4,500. Schooner T. Y. Avery—Manlius Bonner, of St. Ignace, to William Hulmes and others, of Charlevoix, the whole, $400. Schooner G. B. Forester—William McCullough, of Port Huron, to William Spooner, of South Haven, the whole, $300. Steamer Lizzie Walsh—Hermanus Boone to F. K. Kolby and J. C. Post, of Holland, the whole, $700. Steamer Mary—Michael D. Murray to R. J. Murray, of St Ignace, one-half $600.

Christian Rostad, three-sixths of the schooner Lonie Burton, 197 tons, to Michael Zellmann, $2,250.

Anthony Bolstan, one-third of schooner Burton to Peter Hansen, of Washington Island, $1,500.

Sophia Smith, Richard Smith and Herman Rehmer of Waukegan, steamer Emma Blocker to Christian Hansen for $1,500.

Ulysses Cornell, of Algoma, fishing steamer Welcome to J. W. Cornell, of Detroit, $750.

Gustav Clauson, three-fourths of schooner Ebenezer to Gunderwald Gunderson, $250.

Ole Hansen, one-eight of steamer John W. Jones to T. Hansen, $1.

COMPRESSED AIR TO LIFT SHIPS.

The method of using compressed air for raising and floating stranded vessels has recently been given some attention, on account, more particularly perhaps, of the recent stranding of the American Line steamer Paris.

Mr. George W. Dickie, Manager of the Union Iron Works, San Francisco, in a letter to Mr. Frank Richards who had previously written an article on the subject, says :

"There is no doubt that all that you maintain in the article referred to can be accomplished and especially so if ships are built with the idea of using compressed air for such a purpose. I have long advocated the use of compressed air on board ships as a means of safety in case of damage to the outer skin.

"I would like to refer you to volume 19 of the 'Transactions of the American Society of Mechanical Engineers,' containing my paper on the 'Transmission of Power in Naval Vessels.' In writing as I did in that paper, I had considerable experience to support me. The British ship, 'Jessie Osborn,' went ashore about three miles north of the Heads of San Francisco Bay, where the coast is bristling with sharp rocks, and where there is always a certain amount of sea on. Upon examination of this vessel I came to the conclusion that there was only one possible way of getting her off, and that was by using compressed air under the hold deck. For this purpose we strengthened the hold deck by bracing; recaulked it so as to be sure that it was tight; installed a compressor on the deck of the vessel, with boiler, etc., and connected the discharge of the compressor to the deck opening into the lower hold below. The attempt was entirely successful, and although a large portion of the bottom of this vessel was literally gone, openings in it that you could drive a cart through, she was successfully floated out amongst these rocks, several new holes being pierced in the bottom while pulling her out. We could raise and lower this vessel as we pleased after we got her into deep water by simply letting off or pumping air in, and she was kept afloat by this air cushion until such time as the dock was ready to receive her. So that you see this question of the use of compressed air is not a new one to me, and I can therefore fully endorse all that you maintain in your article.

Collision—Contributory Negligence—Anchored Vessel.—A vessel cannot be held guilty of negligence contributing to a collision because her machinery was disconnected and her sails taken down while at anchor, for the purpose of making repairs, when she was properly anchored in a safe berth, where she remained; the collision being caused by the drifting against her in the night of another vessel, which was insecurely anchored. The Martha Davis, 94 Fed. Rep. (U. S.) 559.

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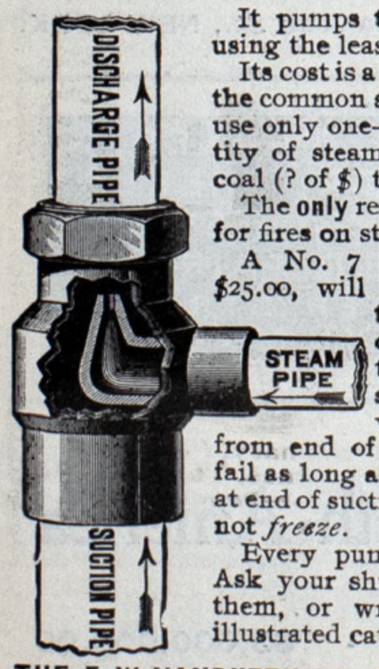

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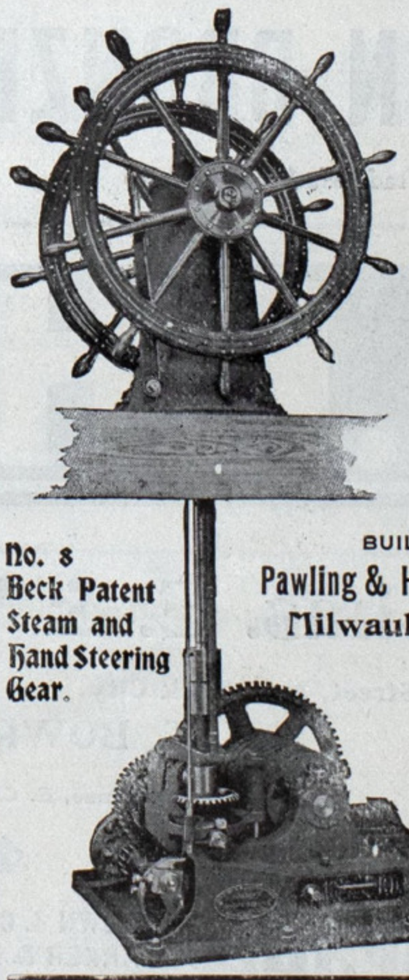

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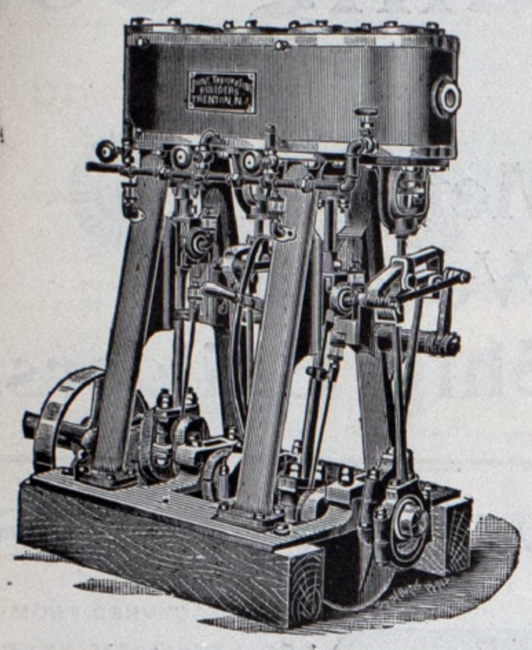

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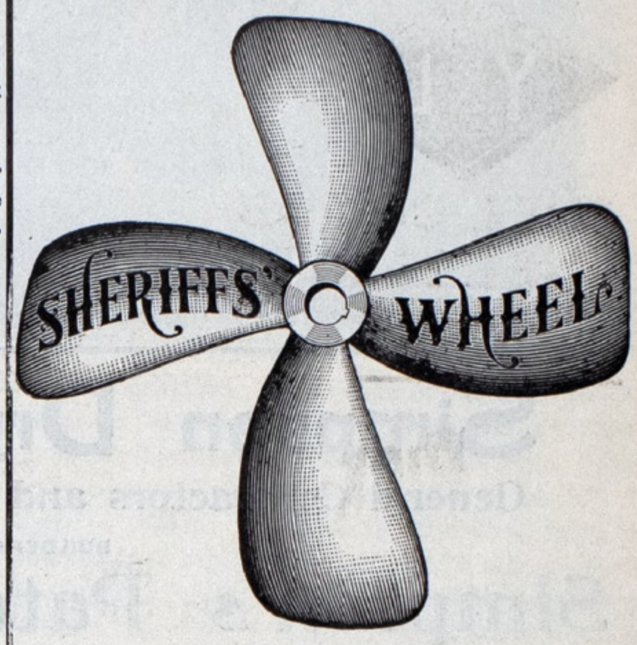

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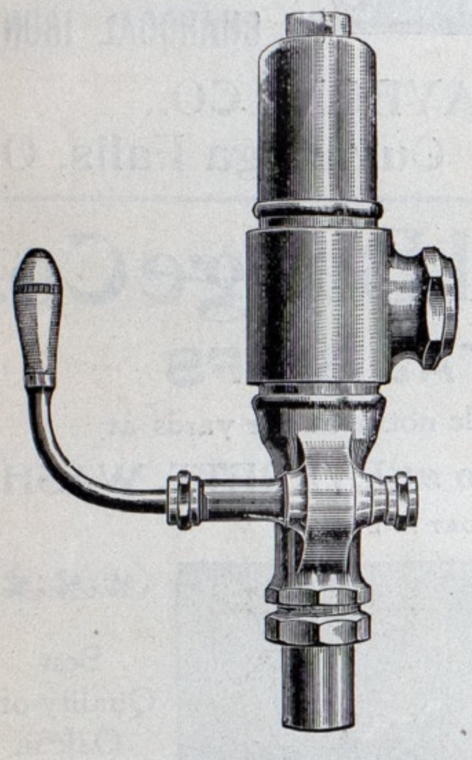

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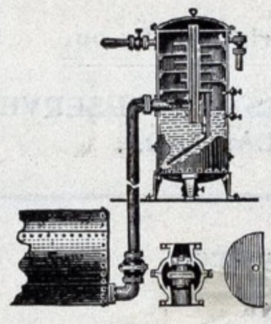

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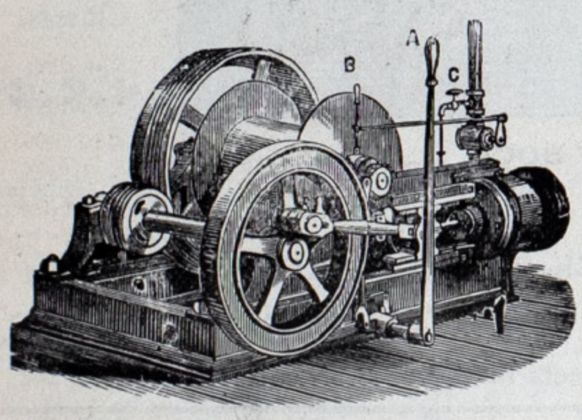

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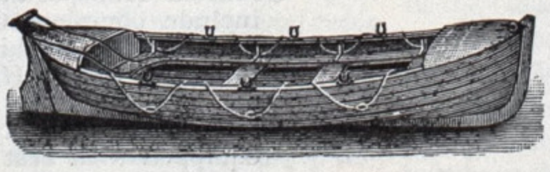

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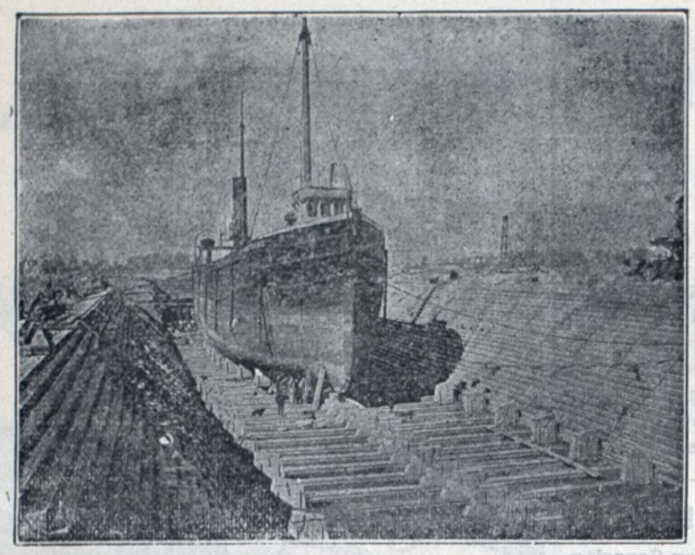

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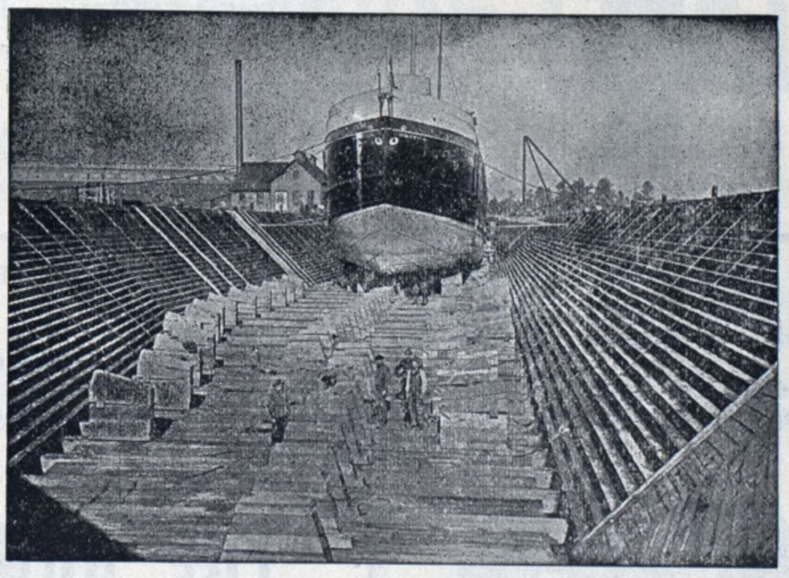

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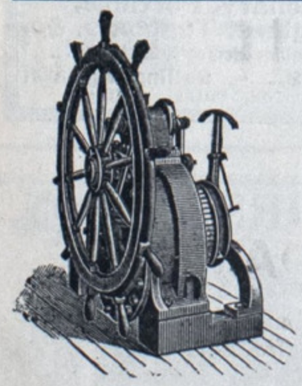

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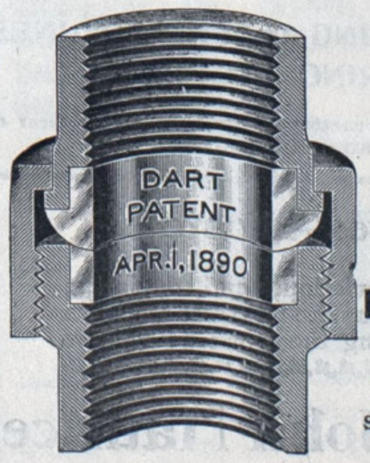

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